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[*Continued on page 3 of cover.*]

AMERICAN ANNALS

OF THE

DEAF AND DUMB.

VOL. XXVIII., NO. 1.

JANUARY, 1883.

THE ORGANS OF SPEECH.

BY D. GREENBERGER,
Principal of the Institution for the Improved Instruction of Deaf-Mutes, New York.

A THOROUGH knowledge of the structure and mode of action of the organs that are concerned in vocal utterance is indispensable to teachers of articulation. It is true that instructors who lack that knowledge sometimes succeed in teaching deaf-mutes to speak, just the same as there are men who skilfully handle crow-bars without having the slightest idea of the laws of the lever. But, of all others, the teacher of articulation ought to be able to perform his task intelligently, and therefore should be thoroughly familiar with the anatomy and physiology of the organs that he undertakes to train in his pupils.

It is a singular fact that while subjects of less importance have received the attention of writers on deaf-mute education, the one under discussion has been sadly neglected. Hence the student teacher is compelled to refer to medical works on anatomy and to treatises on the physiology of speech. The former go more into details than is necessary for our purposes, whereas the latter usually contain too little of the knowledge that we need. It therefore requires a great deal of time and labor to gather those points which are of use and interest to us. Since not every teacher can spare the time and has the necessary means at his command to make such extensive researches, the following synopsis may be of service to some of the readers of this journal.

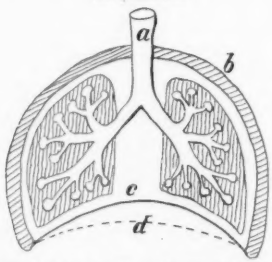
The first condition of the utterance of any of the elements of speech is a current of air passing through the cavities of the mouth and throat. Without that, no articulate or inarticulate sound can be produced. The inhalations and exhalations of the

breath during the act of respiration furnish these currents of air which are requisite for the purposes of phonation, and the various elements into which speech may be analyzed are nothing but modifications of the breath. Thus all the vowel sounds are the result of the breath emitted through different conformations of the cavity of the mouth; the consonants *m*, *b*, *p*, *w*, *wh*, are formed through stoppage of the breath by the lips; the consonants *d*, *t*, *th*, *s*, are produced through stoppage of the breath by the point of the tongue; *f* and *v* through partial stoppage of the breath by the nether lip and upper teeth; *g* (hard) and *k*, through stoppage of the breath by the back part of the tongue and palate, etc., etc. Some of these sounds are accompanied by vibrations of the vocal chords which we call voice.

Breath being the essential element of every sound of speech, it is necessary to give a full description of the organ of respiration and its mechanism. This description may seem tedious, but no part of it could well be omitted.

The lungs are the most important part of the respiratory apparatus. Their cavities, containing the air which we breathe, are formed by numerous divisions and subdivisions of the trachea or air-tube, which become smaller and smaller, and at last terminate in little air-cells, varying from $\frac{1}{70}$ to $\frac{1}{500}$ of an inch in diameter.

FIG. 1.—DIAGRAM ILLUSTRATING THE STRUCTURE OF THE LUNGS AND RESPIRATORY MOVEMENTS.



a, trachea. *b*, bony frame-work of the chest. *c*, figure of diaphragm when relaxed. *d*, the same when contracted.

It is important for our purposes to know, 1st, that the substance of the lungs is of a light, porous, spongy texture, and above all that it is highly elastic; 2d, that the entire air-passages are formed of stiff walls, so that the air always has free access to them—the trachea consists of cartilaginous rings and

the bronchial tubes; even their smallest ramifications have thin plates of cartilage scattered along their sides, so as to be always kept open; 3d, that the air-passages are lined throughout with exceedingly elastic fibres, which extend longitudinally through the bronchial tubes and completely surround the air-cells. The elastic tissue to which these fibres belong may be compared best with india-rubber, because it can be considerably stretched, and when the force that stretches it ceases to act it assumes its former size and shape.

Being placed in the cavities of the chest, the lungs have room to extend in all directions, when they become inflated with air and stretched to the point at which they are ready for elastic counteraction.

During ordinary quiet breathing the movement of inspiration is effected by contraction of the diaphragm, (see fig. 1.) The latter is the musculo-fibrous partition wall separating the thorax from the abdomen. Its edges are attached to the lower circumference of the cavity of the chest. It therefore forms the floor of the latter and the roof of the abdomen. The two cavities are completely separated from each other by the diaphragm, which has only a few openings for transmitting the œsophagus and some blood-vessels. The diaphragm is arched, being convex towards the chest and concave to the abdomen. When the fibres of the diaphragm contract their curvature is necessarily diminished, and they approximate a straight line in proportion to the extent of their contraction. Consequently, the entire convexity of the diaphragm is diminished in the same proportion, and descending toward the abdomen it acts like a piston and enlarges the cavity of the chest from above downward, thus forming a vacuum. The atmospheric air not finding access to this vacuum in a direct way, it rushes into the lungs, and these being highly elastic, they expand and fill the enlarged cavity of the chest. Inspiration, therefore, is an *active movement*, the result of contraction of the diaphragm.

To understand the process of expiration it must be remembered that, after the movement of inspiration is accomplished, the lungs are expanded, the diaphragm is contracted, the abdominal viscera have been pushed down and pressed against the walls of the abdomen, which have thereby become extended. The moment the contraction of the diaphragm ceases, it begins

to ascend and assume its normal, convex shape, whereby the cavity of the abdomen encroaches upon that of the chest. A vacuum is thus formed in the abdomen, in consequence of which the atmospheric air presses the abdominal walls against the intestines, and causes these to push the diaphragm upwards. The elastic reaction of the lungs due to the numerous fibres of elastic tissue, which, as previously mentioned, enter into the structure of the walls of the entire respiratory organs, also sets in at this moment. By this elastic force the lungs are contracted to the size which they had before the inspiration, and in contracting they expel a portion of the air contained in them. The process is still further aided by the fact that the abdominal viscera, which have been pushed down by the descent of the diaphragm, are forced backward by the elasticity of the abdominal walls and the contraction of the abdominal muscles, carrying the relaxed diaphragm before it.

It is evident that while the movement of inspiration is an active one, accomplished by muscular contraction, that of expiration is a passive one, resulting from the elastic reaction of the lungs and the pressure of the atmospheric air, which forces back into their natural positions the organs that have been displaced during the act of inspiration. For this reason the current of air passing through the throat and mouth during the act of expiration is best adapted and almost exclusively used for purposes of speech, although the one going into the lungs during inspiration may be, and is sometimes, used for producing sound; as, for instance, in sighing, exclamations of great surprise, etc. The inspirations require muscular effort, and last some time; whereas the exhalations go on without any effort, and only have to be regulated to furnish a continuous current of air such as is required for the production of sound.

During forced respiration, the action of the diaphragm alone cannot sufficiently enlarge and diminish the cavity of the chest. Such action is therefore supplemented by movements of the ribs and the intercostal muscles. "The ribs are so arranged that in a position of rest their convexities look obliquely outward and downward. During a forced inspiration they are drawn upward by contraction of the scaleni and intercostal muscles between the ribs, and thereby expand the chest. During a forced expiration the ribs are drawn down by the costal and abdominal

muscles, and they thus serve to compress the sides of the chest."

In ordinary breathing the action of the ribs is very slight only, the principal part of the work being performed by the diaphragm. If you watch a person in the ordinary quiescent condition, you will observe that the expansion of the chest caused by the action of the respiratory muscles is barely visible to the eye, whereas the protrusion of the abdomen caused by the descent of the diaphragm is especially marked. Any muscular exertion, for instance walking or running, produces an increased expansion of the chest; and the movements of the ribs accordingly become more plainly visible. "As a rule, normal and natural breathing can be observed in children and adult males only. In the female, the movements of the chest, and particularly of its upper half, are usually more prominent than those caused by the action of the diaphragm." Prof. John C. Dalton, in his work on human physiology, mentions this difference in the mechanism of respiration as a characteristic mark of the two sexes. But whether he considers it the result of the almost universal, though pernicious, habit of tight-lacing he does not say.

So far as I have been able to find out, the best authorities on the subject agree that the ordinary action of expiration is merely passive, and the movement of inspiration, which is an active one, is performed automatically, without any effort of volition. And, since I have not found anything to the contrary, I believe that when we speak in an ordinary, natural tone of voice, the movements of respiration are performed in a manner which is so much like breathing for vital purposes that the difference is barely appreciable. When speaking in a loud voice, above the ordinary tone, the inspirations are deeper and fuller, and during rapid conversation they become short and frequent. But all these varied movements are performed involuntarily. When a greater volume of air has been expelled from the lungs the laws of nature will supply the deficiency without any effort on our part, and whether we turn our attention to the subject or not. Orators, actors, and singers must learn to regulate their breathing in order to be able to produce artificial effects; ordinary speaking, however, does not require anything but ordinary breathing. The best proof of this is the fact that we can sit down and chat with a friend all day without feeling any fatigue. If, while thus speaking in an ordinary, natural tone, it were nec-

essary for us to breathe differently from the ordinary manner, the muscular effort which this would require would certainly cause fatigue. In common with most articulation teachers, I formerly held the opposite view, and believed that the quantity of air which is usually inhaled during respiration was inadequate for the purposes of speech; that the inspirations had to be deeper and more frequent, etc., etc., and therefore thought that regular breathing exercises were necessary for beginners in articulation. But, with the additional light that I now have on the subject, I feel convinced that our deaf-mute pupils do not need these breathing exercises any more than hearing children beginning to learn to talk.

Before leaving this subject, it may be well to mention that usually only forced respiration is carried on through the mouth; but during ordinary, quiet breathing, the mouth is kept closed and the air passes in and out through the cavities of the nose, which begin at the nostrils and lead into the pharynx. The instances of persons who habitually sit with their mouths open and breathe in that way are comparatively few and very disagreeable. This explains why deaf articulators are so apt to speak in a nasal tone. Having always been accustomed to breath through the nose only, they cannot get into the habit of emitting the breath through the mouth as is required in the utterance of articulate sounds. During ordinary respiration, the soft palate rests on the back of the tongue, closing up the mouth passage, and permitting the air to pass in and out through the cavities of the nose. In speaking, however, the soft palate has to be raised, so as to close the passage of the nose and open the one through the mouth, except in the pronunciation of the nasal sounds *m*, *n*, and *ng*. Probably in the case of deaf-mutes the muscles which have to raise the soft palate have not the requisite strength from want of practice, or they do not know how to use those muscles. The best remedy for nasality of the voice is therefore that recommended by Prof. A. M. Bell in his "Principles of Speech," namely, to let the pupil place himself before a glass—his back to the light—and try to elevate his soft palate and depress the tongue, while pronouncing the open vowels *ah* and *aw*. After some practice the student will be able to maintain the elevation of the soft palate in sounding the close vowels *ee*, *o*, and *oo*, and the tone of his voice will be purified.

FIG. 2.

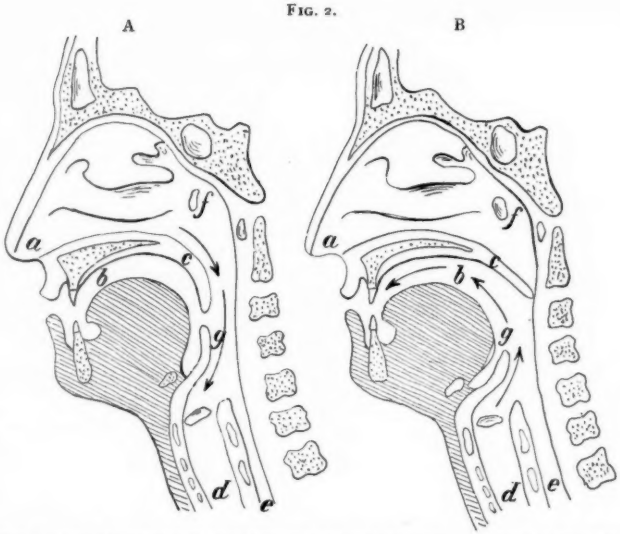


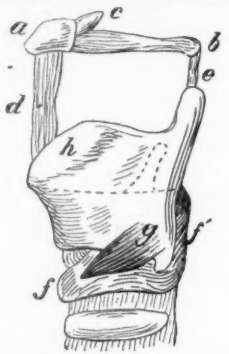
Figure A shows the position of the soft palate during respiration. B shows the same during articulation. In both figures: *a*, nostrils. *b*, cavity of the mouth. *c*, soft palate. *d*, trachea. *e*, œsophagus. *f*, eustachian tube. *g*, epiglottis.

Having described how breath is produced, I will now give an account of that portion of our vocal machinery which changes breath into voice, namely, the larynx.

"The larynx is a cavity situated at the upper and fore part of the neck, between the trachea and base of the tongue. It is narrow and cylindrical below, but broad above, where it presents the form of a triangular box." It is composed of cartilages, which are moved by numerous muscles. In the cavity of the larynx are placed the vocal chords, which are two horizontal bands with a narrow chink between them. In passing through this narrow opening the breath sets the edges of the vocal chords into vibratory motions, and voice is produced. In order to explain the action of the larynx it will be necessary to describe the cartilages of which this organ is formed and the muscles that move them.

The first cartilage of the larynx beginning from below is the cricoid.

FIG. 3.—SIDE VIEW OF THE CARTILAGES OF THE LARYNX AND THE HYOID BONE.

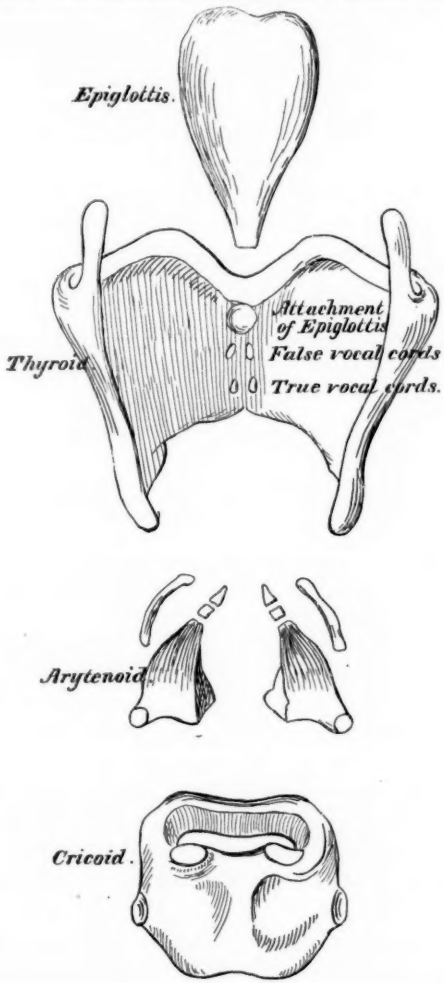


a, body of the hyoid bone. *b*, great cornu. *c*, lesser cornu. *d* and *e*, ligaments connecting the thyroid cartilage with the hyoid bone. *f f*, cricoid cartilage. *g*, crico-thyroid muscle. *h*, thyroid cartilage. The dotted lines show the vocal chords and arytenoid cartilages.

"It is so called from its resemblance to a signet ring (*χρίκος*, a ring.) It forms the lower and back part of the cavity of the larynx. Its anterior half is narrow and convex, whereas its posterior half is very broad, both from side to side and from above downwards. At the point of junction of the two halves of the cartilage, on either side, is a small round elevation, for articulation with the thyroid cartilage," which will presently be described. "The lower border of the cricoid cartilage is horizontal, and connected to the upper ring of the trachea by fibrous membrane. Its upper border is directed obliquely upwards and backwards, owing to the great depth of its posterior surface. Behind, the highest point of the upper border is surmounted on each side by a smooth, oval surface, for articulation with the arytenoid cartilage," the description of which will also be given in the following.

The thyroid (*θύρεος*, a shield,) is the largest cartilage of the larynx. It is so called because it serves the purpose of protecting the larynx against external injuries. It consists of two plates united at an acute angle in front, forming a vertical projection in the middle line, which is prominent above, and called the *pomum Adami* or Adam's apple. This projection is quite distinct in lean persons—more so in the male than in the female. Both plates of the thyroid cartilage are quadrilateral in form, and "their posterior borders, thick and rounded, terminate above in the superior cornua, and below in the inferior cornua.

Fig. 4.—The Cartilages of the Larynx—Posterior View.



The two superior cornua are long and narrow, and are attached to the hyoid bone by means of strong ligaments. The two inferior cornua are short and thick, and present, on their inner surface, a small, oval articular facet for articulation with the side of the cricoid cartilage. The upper border of the thyroid

cartilage gives attachment throughout its whole extent to a strong membrane, by which it is connected with the hyoid bone." The lower border is connected to the cricoid cartilage by another strong membrane, and on each side by a strong muscle. Thus the whole larynx is suspended from the hyoid or lingual bone. (See fig. 5.) Though the latter is not considered part of the vocal organs, it enters so much into their structure that it becomes necessary to give a brief description of it. "It is a bony arch, shaped like a horseshoe, situated at the upper end of the neck under the tongue, and consists of a body, *a*,

FIG. 5.--HYOID BONE.

two greater cornua, *b* and *b*, and two lesser cornua, *c* and *c*. The greater cornua project backwards, and terminate posteriorly in a tubercle for the attachment of a ligament which connects them with the upper cornua of the thyroid cartilage, and helps to support the the larynx."

"The arytenoid cartilages are so called from the resemblance they bear, when approximated, to the mouth of a pitcher, (*ἀρύταινα*, a pitcher.) They are two in number, pyramidical in form, and situated at the upper border of the cricoid cartilage, at the back of the larynx. Of the three angles of the base of each of the arytenoid cartilages, the anterior gives attachment to the true vocal chord. The apex of each cartilage is pointed, curved backwards and inwards, and surmounted by a small conical-shaped, cartilaginous nodule, called the cartilage of Santorini."

"The cartilages of Wrisberg are two small, elongated, cartilaginous bodies, placed one on each side, in the fold of mucous membrane which extends from the apex of the arytenoid cartilage to the side of the epiglottis; they give rise to small whitish elevations on the inner surface of the mucous membrane, just in front of the arytenoid cartilages."

"The epiglottis is a thin cartilage, shaped like a leaf, and placed behind the tongue. During respiration its direction is

vertically upwards, (see fig. 2,) its free extremity curving forwards towards the base of the tongue; but when the larynx is drawn up beneath the base of the tongue during deglutition, it is carried downwards and backwards, so as to completely close the opening of the larynx. Its free extremity is broad and rounded; its attached end is long and narrow, and connected to the receding angle between the two plates of the thyroid cartilage. It is also connected to the posterior surface of the body of the hyoid bone by an elastic ligamentous band."

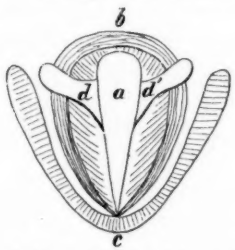
"The inferior or true vocal chords, so called from their being concerned in the production of sound, are two strong, fibrous bands, attached in front to the depression between the two halves of the thyroid cartilage, and behind to the anterior angle of the base of the arytenoid."

"The superior or false vocal chords, so called because they are not directly concerned in the production of the voice, are placed above the true vocal chords, and are formed almost entirely by a folding inwards of the mucous membrane."

Between the true and false vocal chords, on each side, is an oval depression, which is called the ventricle of the larynx.

"The glottis or rima glottidis is a narrow fissure or chink between the inferior or true vocal chords." "Its length, in the male, measures rather less than an inch; its breadth, when dilated, varying at its widest part from a third to half an inch. In the female these measurements are less by two or three lines."

FIG. 6.—LARYNX VIEWED FROM ABOVE.



a, glottis. *b*, cricoid. *c*, thyroid. *d d*, arytenoid cartilages.

The following are the most important muscles of the larynx:

"The crico-thyroid muscle (see fig. 3) is triangular in form, and situated at the fore part and side of the cricoid cartilage. It arises from the front and lateral part of the cricoid cartilage;

its fibres diverge, passing obliquely upwards and outwards, to be inserted into the lower and inner borders of the thyroid cartilage."

"The thyro-arytænoideus is a broad, flat muscle, which lies parallel with the outer side of the true vocal chord." "Its fibres pass horizontally backwards and outwards, to be inserted into the base and anterior surface of the arytenoid cartilage."

"The arytænoideus arises from the posterior surface and outer border of one arytenoid cartilage, and is inserted into the corresponding parts of the opposite cartilage."

A better idea of the structure of the larynx than can be given by printed illustrations may be obtained from studying "The Larynx Phantom," one of Bock-Stiger's anatomical models, of which B. Westermann & Co., New York, are the agents. Every institution where articulation is taught ought to provide one of these models for the use of its teachers.

G. H. Von Meyer, professor of anatomy at the University of Zurich, Switzerland, in his latest work entitled "Unsere Sprachwerkzeuge," (Our Organs of Speech,) speaks of a simple apparatus by which the principles of the construction of the larynx and its action may be illustrated. This apparatus consists of a tube of about 2 cm. diameter, made of pasteboard or any other stiff material. Over one end of this tube a piece of thin flexible rubber hose, about 4 cm. long, is partly drawn and securely fastened. If we blow through the other end of the tube, the air will pass through it perfectly noiselessly; but if we take hold of the free edge of the rubber hose at two points opposite to each other and draw them apart, a narrow chink will be formed, and that part of the rubber hose which is not immediately fastened to the pasteboard will assume the shape of a wedge. Blowing again through the apparatus, we shall hear a sound which is produced by vibratory motions of the edges of the rubber. The tighter these are stretched, the higher will be the sound. Examining this apparatus, we find that the part which produces sound is formed by two elastic walls that are so inclined towards each other that they enclose a wedge-shaped cavity. The current of air blown through the full width of the tube into this cavity is suddenly contracted and forced through a narrow chink between the two edges, by friction against which it sets these into vibratory motions. The conditions under which a

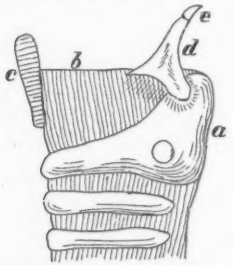
current of air passing between the elastic bands will produce sound are two: first, the base of the wedge-shaped cavity which they enclose must be formed by stiff walls, so as to secure the free passage of the full current; and, second, the edges forming the chink must be stretched. The last condition can be fulfilled by pulling two points in opposite direction, or by fastening one of these points and pulling the other from it.

This simple contrivance is considered by Professor Meyer a true model of the voice-producing apparatus in the human body. The tube of mucous membrane and elastic tissue, which forms the lining of the trachea and laps over its upper end, represents the rubber hose of the apparatus. This elastic tube is attached to the entire inner surface of the cricoid cartilage, except around the two oval surfaces for articulation with the arytenoid cartilages. Thus the lower circumference of the wedge-shaped cavity is formed, and one of the ends of the narrowed chink, the glottis, is securely fastened. In order to stretch the edges of the vocal chords which form this chink it is necessary that the anterior end be drawn from the posterior one, which is fastened to the cricoid cartilage. This is done in the following way. It has been previously stated that the vocal chords are attached in front to the depression between the two halves of the thyroid cartilage, and that the two inferior cornua of the latter articulate on the cricoid cartilage. By means of the crico-thyroid muscle, (see fig. 3,) tension and elongation of the vocal chords may be produced by drawing down the thyroid cartilage over the cricoid.

If the glottis were a chink of the shape of that in the little illustrative apparatus, the inhaled air would press on the outside of the elastic tube and force their edges against each other, so that the opening of the windpipe would be closed and the air prevented from entering. To avoid this, the posterior ends of the vocal chords are attached to the cricoid cartilage at a distance of about five millimeters from each other, so that the glottis has a triangular shape, the base of the triangle being directed backwards. Thus it is kept open in quiet respiration, and the breath permitted to pass in and out. When sound is to be produced it is narrowed, the edges of the vocal chords being approximated and made parallel. The degree of approximation and tension corresponds to the height of the note produced. The narrowing of the glottis is accomplished by rotation of the base of the

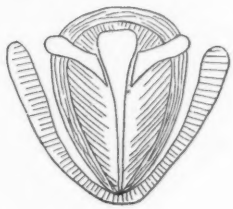
arytenoid cartilages. Of the three angles of this base the external articulates on the cricoid cartilage, and the other two are attached to the true vocal chords. (See fig. 7.) When the thyro-arytenoid muscle, which arises from the posterior surfaces of the thyroid cartilage and is inserted into the greater part of the anterior surface and outer border of the arytenoid cartilage, contracts, the base of the arytenoid cartilages rotates inwards, so as to approximate their anterior angles and the vocal chords that are attached to them.

FIG. 7.—SIDE VIEW OF THE VOCAL CHORDS AND ARYTENOID CARTILAGES.



a, cricoid. *b*, vocal chords. *c*, thyroid. *d*, arytenoid cartilage. *e*, cartilage of Santorini.

FIG. 8.—SHOWING THE SHAPE OF THE GLOTTIS DURING THE PRODUCTION OF VOICE.



Other muscles aid in the elongation and tension of the vocal chords.—The opening of the glottis is done mainly by the arytenoideus muscle, which arises from the posterior surface and outer border of one arytenoid cartilage, and is inserted into the corresponding parts of the opposite cartilage.

[TO BE CONTINUED.]

A PLEA THAT THE DEAF "MUTES" OF AMERICA MAY BE TAUGHT TO USE THEIR VOICES.*

BY MISS EMMA GARRETT, PHILADELPHIA.

It seems to me impossible to add to the weight of evidence that we already have in favor of speech for the deaf.

Nevertheless, as the majority of those who teach them in America think that speech is not for the mass of the deaf, I cannot meet with these instructors without uniting my voice with those who claim that these deaf-born, but not dumb-born, children can be taught to use their voices. If the Milan Convention failed to convince our American instructors, will not the fact of France acknowledging the superiority of the oral method at a recent National Convention at Bordeaux convince them?

Is it in the nature of things that France—the birthplace of the sign system—should accept the oral method, unless led to do so by an overpowering evidence in its favor?

The conservative London "Asylum" is now placing all new pupils under the oral method.

All honor be to Germany for persisting for a hundred years that the deaf could speak, and to those who have been the pioneers of oral schools in America for the past dozen years. Although better methods have been latterly discovered, nothing can ever detract from the praises of those who have borne the brunt and heat of the day in this good cause.

I greatly long for the time when conventions of American instructors can close with such words as those of President Tarra at Milan. After regretting to part from his friends so soon, he said he was, however, rejoiced to think that in departing they would take with them everywhere to the deaf children of their various countries the good tidings, "You shall speak." President Tarra had had thirty years of experience in teaching the deaf,—the first twenty by the old sign system, and the last ten by the pure oral method,—and his testimony is enthusiastically in favor of the latter method, as the one better adapted to instruct them and relieve their affliction.

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My experience in methods has been somewhat in the same proportion, although much shorter, but my conclusions as to the relative merits are the same. President Tarra also states that all subjects who are fit for sign institutions are suitable for oral schools.

In the pure oral school of which I am in charge my greatest successes have been with just such cases as it has been so long claimed could not be best reached through artificial speech,—congenital and virtually congenital mutes.

I have twenty-four pupils in my school, which was opened in October last, so that they have been under instruction only nine months. Of these twenty-four, twenty-two are congenital or virtually congenital mutes; the remaining two had speech, one quite good and the other spoke in a whisper.

We observe only the same difference in ability that is seen in hearing children; some learn more rapidly than others, but we see no reason to be discouraged about any of them. They are divided into three classes. The first class speak intelligibly and use intelligently several hundred words; write and spell correctly the majority of these; read, write, and understand many sentences from our lips; count up to one hundred; are able to name any figure up to one hundred to which you may point; and they calculate such questions as "How many are 20 and 3 and 7?" In this mental arithmetic exercise they read the question from the teacher's lips, then calculate it, then speak the answer, then write the question and answer in correct spelling, tolerable script, and correct punctuation.

Visitors to the school have frequently said to us that their hearing children have not made so much mental progress during their first year at school, not to speak of the speech and lip-reading acquired. The class just described consists solely of children who are either congenital mutes or who lost their hearing before they were eighteen months old.

The second class are moving rapidly up to the first, some of them being nearly up to them. The two who have advanced most rapidly in this class are congenital mutes.

The third class is composed of pupils who either entered late in the year, or who were sick for several months, or who are not as quick as those in the more advanced classes, and one little girl who was rather too young for school-work. They speak

from ten to thirty words; count to ten—some to twenty; write the numbers from one to ten from the teacher's lips; and some of them do very simple calculations in mental arithmetic. They also articulate and read from the teacher's lips the syllables which are the preparation for speech and lip-reading.

From the beginning we talk to them just as though they could hear, and they consequently understand more than they can articulate, just as a hearing baby who is learning to talk understands for a long time more than it can say.

My theory has been that the children should be treated just as hearing children, except that we must reach their minds through the eye instead of the ear, and my practice has been in accordance with it.

We find that as soon as the children realize that they are being taught to talk and communicate with their fellows as others do, and that they are being made like others, it rouses their ambition and enthusiasm, which is a great help to us in teaching them. We hope during the coming year to give speech to a larger number of these afflicted ones than we were able to accommodate last year, as the directors of the school of which I am in charge have decided to purchase a house for it, and to admit double the number of children that we could accommodate last year.

Celebrated physicians have declared that the health of the deaf is improved when they come under the oral method. It is very easy to believe this. Their lungs, which have hitherto been used for vital purposes only, now have their other natural exercise in the respiratory action necessary to the production of speech, which, of course, strengthens them.

In claiming that speech would be valuable to the deaf, we necessarily hold that we can develop them mentally through speech and lip-reading. Any one who looks carefully into the best oral schools must grant this. I say the best oral schools, for the fact that it is not done in a few proves nothing against the method.

The higher education can also be carried on by the oral method, as in the case of Maurice Koechlin, of Lyons, who passed a successful examination for the degree of Bachelor of Letters at Lyons, France, or of Mr. Farrar, of England, who passed the Cambridge Local Examinations with honors in classics and

mathematics, and afterwards matriculated in the London University. I claim that when oral schools are carried to the perfection to which it is possible to carry them, such of the graduates as desire to pursue a higher education may be instructed with hearing people. It seems to me, however, that it would be better for the mass of the deaf to devote themselves to something that would be of more practical advantage to them.

If speech is better for hearing people than barbaric signs, it is better for the deaf; being the "fittest, it has survived." The power of speech and lip-reading bring the deaf into general communication with mankind, and this improves them mentally; the natural and free exercise of their lungs improves them physically; and the feeling that they are being made like their kind, instead of being peculiar and separate from them, rouses in them an ambition which improves them morally.

Here let me quote from Dr. Buxton's remarks at the Milan Convention, as they express so well my own opinions. He says: "I advocate the system of teaching and training the deaf which separates, not congregates, them; which promotes small schools, not large ones; the employment of hearing teachers, not deaf ones; of teachers trained and highly competent, not unqualified and inefficient; which gives to the pupil the speech of his country, not the signs of his class; and which finally sends him out into the world, confident and well instructed, to find his duties and companions there; not a system which leaves so many of them, timid and ill instructed, to turn back and associate with others like themselves." He says again: "Schools should be small, assimilated in all respects to the manner, tone, and spirit of schools for hearing children. The pupil's mind is like a ball, which, wherever it rolls or wherever it falls, comes in contact with something. Let that something be hearing influences, habitual association with those who speak—who are always speaking."

Dr. Buxton says he may be charged with inconsistency in becoming an advocate of the oral system, but that he had always believed and said that speech for the deaf was the best thing conceivable, and that he was only waiting for the proof that it was possible. "That proof," continues he, "I have received; I have seen the possible accomplished; the ideal of my conceptions and my hopes is realized in successful oral teaching, and

in that alone." With regard to the charge of inconsistency, he says: "The question is not whether the speaker is inconsistent, but whether his testimony is true. The man who can most securely plume himself on his consistency (if nothing more) is he who learns nothing, but remains immovable and fixed from first to last. Those, on the contrary, who are ever learning and constantly applying their additional acquirements to practical ends are often open to the cheap and ready charge of inconsistency; but they have their compensation, for it is to such as they that the human race has often owed its greatest obligations."

I think that the nearer we conform to the absolutely pure oral method in our schools for the deaf the more satisfactory will be the results.

I think day-schools are best for the deaf; but if boarding-schools are a necessity anywhere, I think they should be on the cottage plan.

I spoke of the difficulties of articulation-teaching in my article in the April number of *Annals*, and I hope I did not discourage any one from entering upon the work of giving speech to the deaf. It is difficult; but a thoroughly trained teacher, and one who is adapted to the work, sees her pupils gradually acquiring the ability to speak and read the lips; and when their language lessons begin she finds it a most fascinating work. A teacher who understands such teaching does not find it an unusual strain upon her health. One of my assistants has a delicate throat, which had frequently given her trouble during the nine years that she taught before coming to me last fall, and she tells me her throat has never been better than since entering upon articulation work.

I have never understood why our institutions throughout the country are called "combined." Does not the name suggest that the pupils have the benefit of a sort of eclectic system which is supposed to select the good of both sign and oral methods? This may be the case in some of these combined institutions, but so far as my observation has gone the mass of pupils in such schools are reached by signs, and signs alone. We would hardly speak of our English-speaking schools, that introduce a thirty minutes' French recitation daily for a small proportion of their pupils, who make no use of the language in their intercourse with each other or in reciting their other lessons, as any-

thing but English schools. I cannot see how a sign institution with one, two, three, or four hundred pupils, with twenty, thirty, forty, or fifty of these pupils getting a thirty minutes' daily drill in articulation, and making no use of the speech in recitations or their intercourse with each other, should be called institutions for the instruction of the deaf by a combined method.

It is sometimes urged by those who are opposed to speech for the deaf that some of them do not speak pleasantly, but I do not consider that any argument against it. The speech of foreigners is oftentimes unpleasant to us, yet we do not say to them, "Be silent," on that account. One of the finest amateur musicians I have ever known is interested in speech for the deaf. When she visits my school her face looks as happy as if she were listening to music instead of the sometimes discordant but successful efforts of the little ones to make themselves understood. Those who oppose the oral method also say that the speech of the deaf is not easily understood. It seems to me that the written language of sign-taught pupils is much more difficult to understand.

Moreover, we have every reason to hope and believe that, as a teacher in one of our oldest and best-known oral schools said last winter, "when they began they were new to the work, and felt as though they were groping in the dark, but that the methods had improved so much latterly that they expected to show much better results in the next few years than they had in the past."

I have already seen enough to convince me that whenever the principles and practice of pure oral teaching for the deaf are judiciously and strictly followed, they are sure to produce the desired results—namely, intelligible speech, correct lip-reading, and an education acquired through speech.

If from time to time there occur occasional cases who leave oral schools without having been able to accomplish the entire course of study, it will be just what happens in sign-institutions and in hearing-schools, and is no special argument against oral schools.

I do not claim that we can give speech to idiots or have much success with children whose vision is very defective, but I do claim that we can give speech to the children of ordinary intellect and perfect vocal organs, who constitute the mass of the deaf.

SEMI-DEAF, SEMI-MUTE, AND THE COMBINED METHOD.

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If the much vexed question of articulation in deaf-mute instruction is ever to reach a satisfactory solution, it will be through the intelligent and honest recognition of the almost radical differences of physical endowment among those popularly known only as deaf-mutes. It would be hardly more absurd to ignore all differences between hearing persons and deaf-mutes, in our theorizing upon the education of the latter, than to include under the one generic term of deaf-mute sub-classes so widely different as are the semi-deaf, the semi-mute, and the congenital deaf-mute. It will be the aim of this article, therefore, to emphasize these so radical differences of endowment, in order to find in them a possible basis for harmonizing differences of opinion among candid enquirers.

In any ordinary group of a hundred nominal deaf-mutes in our American deaf-mute institutions prior to the recent articulation revival you would have found, upon a closer examination, three strongly marked sub-classes or groups. First, you might have set apart a group of, perhaps, one-tenth of the whole number, whose hearing power you would have found sufficient for oral conversation. These we may call the *semi-deaf*, since to them the word mute has no legitimate, even partial, application. You might then have set apart another somewhat larger group, who, although now too deaf for oral instruction, had yet enjoyed their hearing to an age sufficient for the partial acquisition of speech. These we might properly call *semi-mute*. The remaining three-fourths of the original hundred, unable either to receive or to express ideas by speech, you would have found no good reason, at the period of time referred to, for not grouping together under the one comprehensive designation of *deaf-mutes*. Such, therefore, was the usual classification of discriminating theorizers at that time.

In the light, however, of the articulation experiments which have since been made, and especially of the unwarranted inferences too often drawn from undiscriminating statements, a still further subdivision of this last-named group has now become desirable. Among the seventy-five pupils unable either to receive or express ideas by speech you would have found some—

perhaps half—who had been always and totally deaf; suffering thus the extremest degree of aural infirmity, and its consequent vocal disability. For this class the comparatively new and somewhat awkward term of *toto-congenital deaf-mute* is becoming the generally accepted designation.

For the remainder of the original third group, comprising those whose deafness is somewhat less than total, or, if total now, had not been always so, no single term which should discriminate them from the toto-congenital deaf-mutes on the one hand and from the semi-mutes on the other has yet been suggested, or, at least, generally accepted. The articulationists have often insisted on applying the term congenital to the entire group, notwithstanding its obvious inapplicability to most of them; while their opponents have as often, perhaps, attempted to include numbers of them among semi-mutes, notwithstanding their confessed total muteness when received for instruction. "Virtually congenital" is the compromise term employed by an articulation essayist at the recent Jacksonville Convention, which, although "virtually" begging the very question at issue, is yet such an improvement in candor on some former usage that one would feel inclined to adopt it at once without demur. The more technical term *quasi*, however, so nearly corresponds to this, and so much more neatly matches the *toto* of the other section, that we will venture, in this discussion at least, to designate this intermediate class, who are at most only virtually and not really congenitally disabled, *quasi-congenital deaf-mutes*. We can all, probably, agree that they are, at least, "*sort o'* congenital."

We have, then, at present, these four distinct groups among those usually known to the public as deaf-mutes, viz: (*a*) the semi-deaf; (*b*) the semi-mute; (*c*) the quasi-congenital deaf-mute; (*d*) the toto-congenital deaf-mute; and in order rightly to estimate the past service and the present claims of the articulationists, we shall need to consider each of these classes somewhat in detail.

We have first, then, our *semi-deaf* pupils, or those who, if remaining at home, would be more correctly spoken of as "very hard of hearing," and having, in consequence, an utterance more or less peculiar. The number of this least-disabled class resorting to our deaf-mute institutions for education would greatly surprise the uninformed enquirer. The discriminating faculty, however, of the ordinary visitor at such institutions does not

usually appear to very good advantage; in fact, it seems to suffer a kind of paralysis from the peculiarity of its surroundings. Such visitors usually seem to regard deafness as a sort of absolute disability, no more admitting of degrees in statement than does death itself. The enquiry from them concerning any child, "How deaf is he?" would be about as improbable as concerning a corpse, "How dead is it?" To them the nominal deaf-mute is a real deaf-mute, and nothing less. They do not realize at all that the pupils who are before them probably differ as much among themselves in the degree of their physical deprivation as in their mutual endowments or other natural characteristics; that there may even be some among them who have heard the very enquiries of the visitor, or could, without excessive effort on the part of the speaker, be made to hear them. They evidently assume that the work of instruction is equally difficult in all cases, or, more naturally and probably, that only cases of the extremest disability would be found in such institutions. As a matter of fact, however, the number of their pupils who are merely "very hard of hearing" is by no means small.

Very obviously this portion of the general field constitutes by far the most promising portion for the articulationist; and to say that his apparently most wonderful successes are drawn from it would be only to put in words the natural inference of every reflecting person. Nor can any just exception be taken to his assiduous cultivation of so promising a field, and exhibition of its results, provided only that all the facts of the case are fully and fairly stated, and with such emphasis, too, as really to reach the understanding of the spectators.

It is just here, however, that we often encounter a kind and a degree of disingenuousness—to use the very mildest term—which would seem incredible, were it not so very common. This disingenuousness consists in the persistent use of the term "congenitally deaf," as being properly applicable to all those members of this class whose infirmity, of whatever degree it may be, dates back to their very birth.

Now it may be readily granted that the word congenital, in its strictest sense, is not the full equivalent of the term toto-congenital, which has been coined to express total deafness from birth. As used in deaf-mute discussions, however, the word still has a natural and an accepted significance, which compels the ordinary hearer to understand it as indicating persons whose deafness from birth has been such as to have prevented their

acquisition of language through the ear. No one could be properly expected to suppose that this term was being used to indicate a person with whom he might converse orally, even in total darkness! Yet this has been freely done on the narrowly literal ground that the disability of the child, however slight, was nevertheless congenital!

It is not long since I was present at an exhibition of some articulation pupils, who were all represented to the spectators as being congenitally deaf. Meeting one of them soon after alone, I pronounced the various vowel sounds, in only a moderate tone of voice, at some distance behind him, when he immediately repeated them all correctly after me, as well as many full words! While visiting another articulation school more recently, a teacher's oral statement to me respecting a certain pupil before us, to the effect that the child was congenitally deaf, was understood and promptly contradicted by the child itself! Certainly, in neither of these cases was due care used to prevent misapprehension.

I will give only one other illustration of this too common misleading use of language, though I might easily multiply them from my own observation.

I called not long ago upon a young lady recently graduated from an articulation school, where, during her entire period of instruction, she had been catalogued as "congenital." Yet, I now found it easily possible to carry on a long conversation with her, in almost my ordinary tone of voice, while sitting so far behind her that she could not see my lips! It is true this young lady said that her hearing had been improving somewhat during the later years of her school life. I remembered, however, that many years before this, when the child was still at her own home, her mother had told me that she was even then accustomed to call the child from her chamber orally, while herself standing in the hall below. At no time, therefore, of this child's school life could she have been properly spoken of as "congenitally deaf." To do so could not but greatly mislead every visitor.

As has been already said, the number of this first sub-class is very much greater than would be generally supposed. Every one is, of course, aware, upon the slightest reflection, that deafness, like lameness and blindness, must be a disability with degrees ranging all the way from trivial to total. Few, however, would suspect, without a special experience, how very slight an impairment of the child's sense of hearing will induce the parent

and the district teacher to remit its care and tuition to a more patient, but really less appropriate, system of instruction than their own oral teaching would be. "What did your parents send you here for?" I have repeatedly asked some only semi-deaf child, when it was first so unwisely brought to our institution for education, and have received the ready oral answer, "I'm sure I don't know," as indeed neither the child nor any one else could rationally know. I recall one amusing case of a child with no serious deficiency of *hearing*, but *blind* in one eye, who, having first unsuccessfully sought admission at a blind institution, was afterwards brought, with all necessary certificates, to a deaf-mute institution, and there entered and in due time graduated. One of the accomplishments of this deaf-mute (?) child was piano-playing!

Very slight considerations of convenience, or economy, or hope of the child's future advantage from a knowledge of the sign-language in procuring employment, or fear that the child's present slight deafness may become a more serious disability in after years—all these motives and many others may, and often do, lead parents to apply for the admission of their only slightly deaf children into a deaf-mute institution. I should estimate that at least one-tenth of the entire pupilage of our American institutions might be properly classed as only semi-deaf.

Our second sub-class, the semi-mute, embraces those pupils who, although now too deaf to receive ideas through speech, became so only after having acquired, through the ear, considerable language, which still remains with them as an invaluable acquisition in itself, and as a safe basis upon which to build further progress. The number of this class also in our ordinary institutions is much larger than would be supposed. Probably two-tenths of the whole is not an excessive estimate.

The degree of individual disability in members of this class will depend in each case upon the time during which the child enjoyed its hearing, and the degree of effort which has since been made, by its friends and itself, to retain the speech-power then acquired. There is no necessary reason why the present disability of the child may not be comparatively small; and, indeed, in many cases the speech of these semi-mutes is not noticeably inferior to that of their merely semi-deaf schoolmates.

This will not seem at all strange to those who reflect that, in ordinary life, we always expect an adult, who may lose his hearing either suddenly or gradually, to continue to speak all the

rest of his life, though with a somewhat altered voice. So children, who may lose their hearing in not too early childhood by any disease or cause which does not also enfeeble the mind, ought never, under judicious treatment, to lose the speech-power then already acquired—ought, indeed, under proper care, to be constantly improving it. It rarely happens, however, that home voice-culture is sufficiently patient and persistent for either of these results; and hence the ultimate transfer of the child to an institution is not so obviously unwise as was that of his semi-deaf classmate. The real difficulty of the work as prosecuted there is not, however, necessarily very much greater in one case than in the other.

In fact, concerning both these two classes of lightest disability, embracing together one-fourth of ordinary deaf-mute pupilage, some general remark, applicable alike to both, should be here made, before proceeding to the two remaining classes of much heavier disability.

It deserves notice, then, first of all, that nearly the whole of the popular wonder at articulation successes rests upon the exhibited proficiency of these two very small and only slightly-disabled classes, which really constitute no portion of true deaf-mute pupilage, and from whose success no legitimate inference for the latter can be drawn. By this I mean that if the visitors at our articulation schools were compelled to make up their judgment of the system solely from the performances of those pupils who were neither semi-deaf nor semi-mute, they would generally at once pronounce the whole thing a most decided *failure*. I do not mean that a certain kind of interest would not be felt in even the most inferior cases, especially by visitors of unusual philosophic curiosity, or of rare enthusiasm, but the admiration and wonder of the ordinary visitor would never survive its restriction to the real deaf-mutes before him. It is true that such a visitor is aware of no good reason for not anticipating for all the pupils a success equal to that of the best if only time enough is allowed; and so he listens with more or less patience, and even interest, to all; but if he had witnessed no superior performances of semi-deaf and semi-mute pupils to set before him a higher standard and awaken these pleasing, but delusive, anticipations, the whole exhibition would seem to him, as it really would be, insufferably wearisome and distasteful.

This is not the appropriate place for demonstrating, as I hope easily to do further on, how delusive these anticipations of the

visitor in regard to the future progress of the true deaf-mutes before him really are. To ascertain this for himself, such a visitor would only have to attend some convention of such articulating deaf-mute graduates alone from which semi-deaf and semi-mute graduates should be rigidly excluded. Popular interest in the system could not survive such a convention one hour. The very imagination of the scene is too painful. A Babel of dissonant and unintelligible utterance addressed only to straining and baffled vision—a chaos of uncertainty and blank bewilderment!

If to this it be replied that a convention of gesticulating deaf-mutes would appear even more confused and confusing, it should be remembered that it is the point of mutual *intelligibility* which is mainly in question, and that however mysterious the signs of deaf-mutes may appear to the spectator, they are all clear to each other.

If it be further replied that it is no part of the professed aim of articulation to fit the pupils for mass-meetings, but for ordinary social intercourse, let this be granted—conceding, as it really does, a large part of what has often been claimed for the system by over-zealous advocates, viz., the possibility of addressing and of being addressed intelligibly in public—and let the hearing visitor be invited to mingle in social intercourse with the members of this supposed convention of deaf-mute articulation graduates upon the floor of their hall. If the visitor did not find himself nearly as effectually isolated from most of them as from an equal number of manually taught deaf-mutes, his experience would be a surprising one. The truth is, the painful and pitiful meagreness of the best result which articulation has yet demonstrated for the real deaf-mute is only veiled from the public by the deceptive halo which invests the performances of that very small minority of nominal deaf-mutes who attained nearly all of their articulate utterance in precisely the same way as ordinary people.

The second point which I wish to make in regard to these two classes of semi-deaf and semi-mute pupils is, that the success of our American deaf-mute institutions in perpetuating and improving the original speech of these two classes has been in past years, and still is, quite equal to that of any articulation school. There certainly is no good reason why it should not be so. There is no mystery and no marvel in the preservation of an original endowment like the one in question with fairly pa-

tient assistance from teachers who can themselves hear. I am confident that the success of the best articulation schools with these two classes, as exhibited to visitors, is not at all superior to that of the manual institution with which I have been connected for thirty years past. I can at least testify from personal knowledge that there has been no time within that period when there have not been many such cases under careful and successful training at the Hartford Institution. I am personally acquainted with scores of such graduates, who are now successfully employing in their daily life this original endowment of articulate speech, perpetuated to them by the patient tuition of their manual teachers in connection with their regular manual instruction. Indeed, to those who have been led in any way to believe that some new light has recently arisen on the American deaf-mute world in this matter, it will doubtless be a surprise to learn that a convention of all the excellent articulators among the graduates of the Hartford and New York manual institutions during the last twenty-five years would greatly outnumber any similar convention that could be called of graduates from any American articulation schools. This, of course, is not really surprising, so far as mere numbers are concerned, to those who know the facts in the case; but it is more to the point, perhaps, to add that the former convention would not probably appear at a disadvantage in any respect whatever as compared with the latter.

The method of dealing with such pupils in those earlier years was simply to place them in the class of some hearing teacher who was expected to make as much use as possible of speech, instead of, or at least in addition to, signs, in all his school-room communication with them. A special articulation teacher was meantime occupied in discovering and developing vocal power in hopeful cases, taken miscellaneously from all the classes.

Under the Bell system of Visible Speech, as personally introduced by Dr. Bell at Hartford, by which a scientific development of the voice from the very outset is sought, the former practice was somewhat modified. The number of articulation teachers was increased, and the former miscellaneous practice of the school-room was superseded by short periods of special training at intervals during the school-day stolen from the pupil's regular instruction. This is the method now known as the "combined method"—perhaps because it unhappily "combines" so many embarrassments and disadvantages for the proper pupils of the institutions using it!

And this brings me to my third and most important remark in regard to these two least-disabled classes of our nominal deaf-mute pupilage, which is, that by as much as these two classes are differenced from real deaf-mutes and allied with speaking and hearing people in their endowments and characteristics, by just so much are they obviously the inappropriate pupils of manual institutions and the peculiarly appropriate pupils of articulation schools. They should, therefore, in all cases, be committed to the care of the latter, if sent away anywhere from their own homes.

There is no greater or more unhappy anomaly in the whole educational field than the associating in one institution and under one teacher two such radically different classes as are these virtually hearing pupils and real deaf-mutes.

But why, it may be asked, should these pupils be committed to any other care and culture than that whose past results have proved so very excellent, as has just been claimed for them? It should be done for the sake of the manual institutions themselves and their appropriate pupils, if for no other reason, is the sufficient answer.

So far as the semi-deaf and semi-mute pupils are concerned, something may indeed be granted in favor of the combined system, though even for them the balance of advantage is probably against it. The value of signs in quickening the mental development of even such well-endowed pupils as these is frequently strongly insisted on; and I yield to no one in my own appreciation of this uniquely luminous and intensely vital language, incomparable in many important respects among all the languages of men. A delightful accomplishment for any one, a valuable auxiliary to very many, and a most invaluable dependence to many more—all this the sign-language indisputably is. I stand amazed beyond measure at the incredibly untruthful disparagement of it by some articulationists at the recent Milan Convention and elsewhere. Such misrepresentations, by whomsoever made, stamp their authors at once as either utterly ignorant of that which they so grossly caricature, or as utterly unfair. Nay, more; it stamps them as also incompetent in a peculiar and fatal manner, even in their own chosen specialty. No one who is unable to recognize the wondrous vitality, force, and beauty of this most picturesque and pliable instrument of human thought, God-given originally, and refined and developed by generations of human genius, is really fit to grapple with edu-

cational problems under any aspect, even so purely mechanical an one as is mere articulation.

Beautiful and valuable, however, as this sign-language is, there can be no question that its acquisition by the semi-deaf pupil will require considerable of his time, while it is evidently as little indispensable to him as would be the raised letters of the blind or the crutch of the lame. It must be granted, too, that the free use by him of so fascinating a vehicle of his thought will lessen both his opportunity and his inclination for that constant practice in spoken language upon which his proficiency in it must depend.

If he is to rely on speech alone in his human intercourse, as he surely may and should, then everything else may properly give way to his most perfect preparation for this. This one result can obviously be best secured where it is the exclusive and constant object of attention. Even granting, then, that a fairly satisfactory articulation can be secured by all semi-deaf pupils, and by many semi-mute pupils, at a manual institution, with the additional and very great benefit of a quickened mental development through the sign-language, and also that in those cases where the progress in articulation may be less satisfactory the more rapid mental development through the sign-language is a large compensation to the pupil, it would still be, probably, generally admitted to be better for the child, upon the whole, that he should receive his entire education at an articulation school.

But whether this be so or not, there can be no question that the best interests of the manual institutions themselves, and of those who are the proper objects of their care, demand the removal of both these two classes of virtually hearing pupils; and it is upon this ground principally that I urge it.

The argument against the combined method has two distinct aspects. The first in importance is its injury to the congenital deaf-mutes — both those who are the subjects of its experiments, and also their classmates who are thus unhappily hindered from their otherwise possible progress. This injury will, of course, be more appropriately treated when considering the third of our sub-classes, the quasi-congenital deaf-mutes. The second and much lighter, but still very grave, injury is that resulting from the anomalous intermingling, under one system of instruction, of two so radically different classes of pupils as are these virtually hearing children, whose cases we have been considering,

and real deaf-mutes. It is this last aspect of the argument that I now wish to urge; and that principally, as I have already said, from the side of the deaf-mute himself.

The manual institutions admittedly exist primarily for the instruction of real deaf-mutes; and this by the sign-language, in combination with the written word. Now, every teacher of deaf-mutes by this method knows, however little others may realize the fact, that there is no other kind of teaching in which success is so dependent upon the teacher's constant magnetic contact with every mind in his class. Herein lies the peculiar charm, and also the peculiar and severe strain, of this method of teaching. Comparatively little can be accomplished by even the most devoted of teachers, if this indispensable *rapport* between teacher and pupils is much disturbed.

Now, the maintenance of this invisible magnetism depends largely upon the skilful appeal of the teacher, through nature's own methods, to the inner susceptibilities of the pupils themselves. It is also a direct radiation of the teacher's own personality, which it is exceedingly hard to maintain for successive hours even under the most favoring circumstances, and which it is impossible to maintain in an effective degree under circumstances greatly unfavorable. What possible chance, then, has any teacher of really maintaining this mysterious mental magnetism upon such a mixed class as we are imagining, the mental wants and difficulties of the two sections of which must be so wholly dissimilar.

The great want of the *deaf-mute* is *language*—common, simple, natural language—this first, this last, this all the time. Not rules for language, not definitions, not technical terms of grammar, nor anything of a similar nature. These are, one and all, useless and worse than useless at any, except perhaps the very latest, stages of his course, when, by incessant practice, he shall have acquired the material upon which thus to generalize. Science should indeed underlie and interpenetrate all this practice, from first to last; but it should be science, not in the *pupil's* conscious and technical apprehension, as some objectors seem persistently to misunderstand in the face of careful and ample statement to the contrary, but science in his *teacher's* mind, systematizing, simplifying, and skilfully grading the whole arduous road. Practice, practice, practice—repetitious and unremitting practice, with every possible re-enforcement of the pupil's interest by every most skilful device—this is the key-note of all successful deaf-mute teaching.

But how totally unlike all this is the real want and the real interest of the semi-deaf and semi-mute pupils in such a class. That facile command of simple language, which is the deaf-mute's rarest achievement, and his teacher's almost highest ambition for him, has been already the easy and unconscious acquisition of the virtually hearing child before he entered the school-room. How, then, can such a child be reasonably expected or required to engage with real interest in repetitious memorizings of formulas already familiar to him by years of practice? With him, as with other hearing children, language has been absorbed, not acquired by conscious effort. How can it be otherwise, then, than that his interest should flag under the effort to retrace now, as with crutch and staff, his former elastic steps along the familiar road? Of course his interest must and will fail, and the fact of this cannot but be embarrassingly and annoyingly evident to the teacher, if not to the whole class.

No resource seems left to the teacher, except to recognize this inherent difficulty in the case, and to divide his little class into two sections, striving to occupy as best he can the time and attention of his virtually hearing pupils with an entirely different class of studies from those pursued by the deaf-mute portion. But such a subdivision of a class, necessary though it may be, is none the less unfortunate. The deaf-mutes are rendered uneasy and discontented by their restriction to what seems to them an inferior range of study, while more or less of the teacher's time is withdrawn from them if he supervises in any effective way the studies of the other section. The radiating chords of magnetic influence are broken in every direction, and the ultimate attainment of the deaf-mute portion of the class is far less than it might have been had not the already too heavily weighted teacher and class been thus miserably further handicapped.

Moreover, the very presence of these virtually hearing pupils in a deaf-mute class-room is itself a flagrant injustice to the latter. They are present there not as more forward companions, by whose rapid progress the deaf-mutes should be justly stimulated in their own efforts; rather are they felt to be there as an altogether different class of beings, laboring under disabilities immensely lighter, having enjoyed opportunities immensely greater, and whose present class performances always attract an undue share of attention, and generally subject the more labored, but really more praiseworthy, efforts of the deaf-mute to comparisons both discouraging and exceedingly unjust.

When to all this is added the confusion and interruption of school-room work, caused by the intervals of absence of the virtually hearing pupils while they are undergoing their articulation drills, we have an aggregate of embarrassment to the proper work of a deaf-mute school-room, which is quite serious.

The sum total of educational opportunity which has been thus subtracted during the last ten years from the privilege and the right of deaf-mutes, in all our manual institutions which have allowed the combined method thus to hamper and hinder the working of the pure manual system, has been very great. And all this loss has been incurred for what? For no gain at all which cannot be as well secured elsewhere in an altogether different way.

Had this question been ever submitted to the decision of class-teachers in manual institutions—the really most competent, because most impartial, of all arbiters—I cannot but think that controversy upon the subject would have at once ceased; at least so far as these two classes of merely nominal deaf-mutes are concerned. It is not, perhaps, greatly to be wondered at that the directors and principals of institutions, with whom the decision has hitherto rested, should feel reluctant to recommend the removal from their care of any portion of their pupils, especially of that very portion whose forwardness in general progress and whose oral accomplishments appear to an unthinking public to reflect the most credit upon the institution. Even the fact that they themselves fully know how unfounded and utterly unjust to the deaf-mutes such a comparative estimate is, can hardly be expected to lead them to such an heroic act of self-immolation, as it would seem to them; but if only the single and simple motive of the greatest good to the greatest number of real deaf-mutes were operative in their minds, as it certainly should be, I cannot see how there could be a moment's hesitation in recommending this removal.

And it is just here, as it seems to me, that the disingenuousness of some articulationists, upon which we have already commented, in claiming so much undeserved credit for this portion of their work, has borne some of its most injurious fruit; furnishing, as it has, to the manual institutions the strongest possible motive to retain for themselves as large a share as possible of this cheap and easy glory. Had the articulationists, from the outset, candidly and plainly acknowledged the

real truth in regard to their semi-deaf and semi-mute pupils, basing their whole claim to peculiar credit upon what they could accomplish for the more disabled cases, they would not, indeed, have shone so conspicuously before the public as successful inaugurators of a new departure in deaf-mute instruction, but they would probably have gathered to their own institutions a larger number of those really needing their peculiar culture.

There is, indeed, the least possible just occasion for the professional pride of either a teacher or an institution in the performances of these very slightly disabled pupils, whether in articulation or in language. Their articulation is substantially such as the Lord gave and hath not taken away, for which, therefore, they are called on to bless the name of the Lord only, and not of their Alma Mater, whether manual school or oral. Their literary performances are achieved under such comparatively slight disability, and by favor of such greatly larger privilege and opportunity than those of their deaf-mute classmates, that even when quite superior to the latter they may be far less deserving of credit. To those, indeed, who have any just conception of the heaven-wide difference which distinguishes divinely appointed sonal thought from merely visual thought,—wherein lies, I believe, the real explanation of the congenital deaf-mute's deepest disability,—to all such, even the most imperfect of a real deaf-mute's linguistic efforts will seem by no means discreditable; while the best of his efforts, rising, as they not rarely do, to the full level of elegant idiomatic English, will be recognized as far outshining in real marvellousness even the most brilliant of semi-deaf and semi-mute productions.

Indeed, it is both curious and amusing to see how these slightly disabled persons seem themselves often unconsciously to admit the very small claim upon public admiration which they would have as such, by the jealousy with which they guard their reputation for deafness, as if it were an indisputable endorsement of their own native force in overcoming its malign influence! It is no uncommon thing to find such semi-deaf and semi-mute pupils, in after life, really resenting true statements respecting their early hearing endowments, in order, apparently, that the highest possible credit may be awarded them for their present attainments. Yet many and many a congenital deaf-mute, in his laborious struggles under his almost deadly disability, has evinced a native vigor of mind which might well challenge the

deepest respect of the most critical observer, even when the language born of such struggles would bear no comparison with the facile freedom of really much inferior semi-mute classmates.

So far, therefore, will the judicious manual teacher or manual institution be from feeling any special pride in these lightly disabled pupils, and especially from disingenuously putting them forward in public exhibitions or elsewhere as fair representatives of average deaf-mute possibilities, either in articulation or in written language, that both teachers and institutions will on the other hand take every opportunity to explain and emphasize the radical differences between these pupils and real deaf-mutes. So far, moreover, will they be from reluctating at the removal of such pupils from their own care to more appropriate tuition that they will rejoice in this removal both on their own and the pupils' account. Their own only just occasion for professional pride they will seek and find among their deaf-mute pupils alone, and chiefly here, too, as I think, among those of the very heaviest disability—*i. e.*, among the apparently duller portion of the class. That is not the really highest success nor the justest occasion of professional pride which most brilliantly pushes forward in idiomatic English the exceptionally brightest, even among deaf-mutes, but it is that, rather, which evenly lifts the entire class, bright and dull alike, to the moderate level of steady thought and clear expression.

It deserves the most serious inquiry, indeed, of all friends of genuine deaf-mutes whether the whole tendency of modern theory and practice to specialize itself in experiments upon exceptional cases does not need a partial recall to that patient persistence of former years, whose principal aim was the preparation of the merely average pupil for ordinary life. The organization of "high classes" in our primary institutions a quarter of a century ago was the first marked step in this direction; the establishment of a college for deaf-mutes fifteen years since was a still more marked step; while the more recent articulation movement marks the same tendency in an even greater degree. So far, of course, as any of these experiments are wisely limited, they are wholly praiseworthy and productive of great benefit to the few fitting subjects of the experiments; but so far as they withdraw interest or effort from the many and concentrate it on the fortunate few, or so far as they tend to dissatisfy an unthinking public or the mass of deaf-mutes themselves with that merely moderate success which is all that the average case ad-

mits, these exceptional experiments may, any of them, become injurious to the cause at large.

As a teacher, then, having regard only to the best working of my class and to the maximum of advantage to the most needy, and, I may add, the most interesting portion, I confess I am always unfeignedly sorry to see any semi-mute, however bright, claiming any portion of my time and effort. I know that such a pupil does not need, in any special degree, that peculiar instruction which it is my privilege to attempt to give to such as do need it, while he does need that which I have no wish to engage in giving to him or any one else—mere mechanical speech. Let him go, then, where his want can be best met.

The real deaf-mute, on the other hand, does need the most careful and skilful mental guidance, and for it he depends utterly upon earnest, experienced, sympathizing teachers. May not such teachers, then, who have gladly elected to devote their own lives to such pupils, be reasonably impatient of any necessity for diverting even a portion of their effort to this more superficial and far less necessary work? For myself, I should hail with sincerest joy the day which should wholly remove from all our deaf-mute class-rooms, to the privileges of special articulation schools, every semi-deaf and every merely semi-mute pupil.

The argument thus far has, of course, not even touched upon the real point at issue, as regards articulation itself, which is, whether articulation can possibly become a universal, or even a very general, means of instruction for the remaining two subclasses of our original division, the quasi-congenital and the toto-congenital deaf-mutes, constituting together three-fourths of our nominal and all of our real deaf-mute pupilage. Nothing has as yet been here attempted, except to combat the almost invincible tendency of the unthinking public to infer an affirmative answer to this question from wholly irrelevant data. By as much, however, as the disability of the deaf-mute is deeper and his necessity more urgent than that of the semi-mute, by so much the more are painful, fruitless, and even injurious experiments upon him to be deprecated, even when originating in mistaken kindness. The further discussion, therefore, of this most important question, both in its more general aspect and in its relation to the combined method, will form the subject of a second and concluding paper in the succeeding number of the *Annals*.

NOTES OF PROGRESS IN THE EDUCATION OF THE DEAF.*

BY DAVID BUXTON, PH. D., F. R. S. L., LONDON, ENGLAND.

THE tone of thought in which my subject must be treated is, I think, the prevalent and characteristic tone, with most of us, at a meeting like the present. The first impulse, with the elder members at any rate, is to look back upon the twenty-five years which have elapsed since the Association was founded—years of active work and of marked progress in the entire field of Social Science.

The area to which my labors have been chiefly restricted, and to which my inquiry will be directed to-day, is but a small corner of that field; yet, here, too, retrospection and comparison are the acts to which I must invite you.

From time to time, and almost from the very beginning, the class commonly denominated the "deaf and dumb" has engaged attention at the annual meetings of this Association.

At its second meeting, at Liverpool in 1858, I read a paper on the "*Causes of Deaf Dumbness; Congenital and Acquired*," which was published at length by the local Medical Society in their own professional organ.†

At Leeds, in 1871, Mr. Dalby, the eminent Aural Surgeon, of London, brought forward the subject of practical education by the "German" System; and great interest was imparted to the occasion by the presence of a deaf gentleman from Rotterdam, Mr. Polano, who had been educated by that system, and who entered freely into conversation with gentlemen who were present.

Again at Liverpool, in 1876, I read a paper on the "*Present Aspects and Prospects of Deaf-Mute Education*" which was published both in this country and in America, in which, occupying the position I then did, somewhat sanguine views were expressed. Yet, in effect, changes only then alluded to have

* A paper read in the Education Department of the National Association for the Promotion of Social Science, at the twenty-sixth annual Congress, at Nottingham, England, on Friday, 22d September, 1882, William Woodall, Esq., M. P., in the chair.

† The *Liverpool Medico-Chirurgical Journal*, for January, 1859.

actually come to pass far more rapidly and completely than their most zealous advocates ventured to look forward to, or to consider possible.

At Cheltenham, in 1878, the subject was treated by my colleague, Mr. Kinsey, chiefly from the educational point of view,* he being the Principal of the then recently-opened Training College for Teachers of the Deaf, at Ealing, of which I have the honor to be the Secretary.

And now I ask your attention to those *Notes of Progress* which this subject presents, and which cannot fail to strike most forcibly every interested observer at the present time.

My own experience would take us further back than would be interesting to you or is necessary to the discussion. I will take it for granted that in the earlier period causes were at work, though slowly and silently, which showed themselves more active and potent afterwards, along with others of later origin; and I will limit the present survey to the last twenty-five years, the age of this Association. This is not only more appropriate to the occasion, but it will concentrate our attention, condense our facts, furnish us with more recent and striking data, and thus afford us the means of more effective contrast.

If, at the present meeting, the Association at large finds itself called to count its conquests, marking each advance, and congratulating itself upon the general acceptance to-day of principles once hotly debated and stoutly denied—so, in our smaller sphere of usefulness and duty, can the same be done by my colaborers and myself.

We can note, most distinctly, remarkable progress in every branch of the subject and on every topic of inquiry. This is sufficiently emphatic and promising in regard to our own country, while, in other countries, it has passed far beyond the stage of promise into that of mature result. I will endeavor, as concisely and as pointedly as I can, to contrast the position of this subject a quarter of a century ago with that which it occupies to-day in regard to the following particulars: Legislation; Public attention and interest; Literature and the Press; Statistics; System of Instruction; Teachers and Teaching. Though not in this exact order, each point will be considered in its turn.

*See "*The Education of the Deaf on the 'German' System.*" London: W. H. Allen & Co. 1879.

The legislation in regard to the deaf is scanty, and is, I regret to say, permissive only. Indeed, of the acts which Parliament has already passed, it is sad to add that they are not fully carried out.

Yet legislation, we must remember, must be, from its very nature, slow. It is the index and the product of something else—public interest. In the meantime we have our cause and our advocate in the President of this Department—Mr. Woodall, M. P.—the parliamentary representative of the subject, who is only waiting to see in which direction and by what means the cause can be most effectually promoted. It is certainly not to our credit to know that in every country but our own, wherever the deaf are educated *at all* they are educated *with State aid.* Even our own fellow subjects, when they live under a *Colonial* government, and *only then*, freely tax themselves for the education of their deaf children. The British taxpayer alone, among all civilized Christian men, enjoys immunity from taxation for the instruction of those who under the name of the "abnormal classes"—those without hearing, without sight, and without ordinary mental power—are the special care of even such a poor and remote nation as Norway—that country having so recently as in the April of last year (1881) consolidated, reaffirmed, and developed all its previous beneficent legislation for the compulsory education of the three classes just described. Denmark has done this since 1817; and Sweden is expected speedily to follow the example of Norway.*

After this, our survey will be more encouraging. First I would note the spread of knowledge of the subject and, along with this, a better appreciation of its special features and a more intelligent interest in it.

Never till 1851 was there any census taken in this country of the deaf and dumb population. The returns might still be made more perfect, more full on the one hand and more accurate on the other. Still, we must be thankful, and patient also. The rest may come in due time. Meanwhile the fact is there—a separate enumeration of the deaf forms a component part of our decennial census, and we are thus enabled to compare their numbers and their proportions to the whole population every ten years:

* Letter of Fru Rosing of Christiana, 12th October, 1881.

	Total Population.*	"Deaf and Dumb."	Proportion of Deaf and Dumb to whole Population.
1851	27,511,801	17,300	One in 1,590
1861	29,321,288	20,311	One in 1,432
1871	31,845,379	19,237	One in 1,644

[It was hoped at this point to quote the returns for 1881, and application was made to Sir Brydges P. Henniker, Bart., H. M. Registrar-General, for permission to give the result of the census of last year. The reply, dated September 7th, 1882, expressed his regret that he was unable to furnish the particulars, the reason being—"the abstracts relating to the Deaf and Dumb are not yet complete, and will not be available for some months."]

The next point to be noticed is the spread of education. Schools have increased in number, most of the older ones have undergone enlargement, and generally speaking all are full. The School Board organizations for deaf children are, of course, entirely the work of the last few years. They are found in London, (in the north, west, east, and southeast districts,) in Sheffield and Leeds; and a similar class is about to be established here in Nottingham.

In 1851 there were at school 1,300 deaf children.
" 1861 " 1,640 "
" 1871 " 1,979 "
" 1881 " 2,646† "

Thus the number of children at school has been exactly doubled in thirty years.

But there are still better things than the mere multiplication of schools and an increase in the number of scholars, gratifying as those facts are, even standing alone. These are—improvement in the quality of education, the adoption of a better system, the employment of superior teachers, the aiming, not un-

*These figures give the totals for Great Britain, Ireland, and the Islands in the British Seas.

†The figures for 1851, 1861, and 1871 have been frequently quoted before. Those for 1881 are taken from the "Table of Institutions" prefixed to the *Report of the Proceedings of the Conference of Head Masters, etc.*, held in London in 1881, (London, W. H. Allen & Co.,) and embrace the returns made to the Editors at the close of that year.

successfully, at higher results. Here I speak with an emphasis and hopefulness which, because they are well grounded, on the largest accumulation of facts which I could bring together, are the main reasons for my appearing here to-day to bear my testimony on this most vital point. To this I shall return presently.

Next, pray note how the subject has extended into the dmoain of literature—whether represented by reviews, magazines, leading articles, or reports in the public press, from *The Times* onwards—also into the arena of public discussion, the transactions of learned societies, the meetings of specialists, the conferences of experts, and by deputations to members of H. M. Government. All this describes a change which is no less than a revolution, and all within the lifetime of this Association. I well remember when the only literary publication of any note available to the general reader was the article "Deaf and Dumb" in the *Encyclopædia Britannica*. That article had been copied into one edition after another, with few additions and no improvement, until 1858. In that year the eighth edition appeared, and in it the original article was reprinted once more. Popular ignorance and general indifference had kept it in its place, though it had become obsolete; and this I dared to say in the pages of the *Athenæum*.* The publishers of the *Encyclopædia*, Messrs. Adam and Charles Black, of Edinburgh, "felt obliged," they said, "to depart from their usual practice of not noticing such attacks," and honored me with a long reply a few days afterwards;† but as a matter of fact the article has never been reprinted. From the last edition the peccant article has been expunged bodily, and its place supplied by one written by a practical man, a friend and former colleague of my own.

The article most commonly referred to now, both by professional and general readers, is the one under the same title in *Chambers' Cyclopædia*. It has already passed through two editions, and if the writer should have the opportunity of preparing it for a third issue, he very frankly tells his present audience that he hopes it will record not only the improvements to which he is now calling your attention, but other greater ones as yet undeveloped or immature.

I have already mentioned that this is the fifth occasion on

* See *Athenæum*, May 22d, 1858.

† *Ibid.*, June 5th, 1858.

which this subject has been brought before this Association. It has also been before the British Association for the Advancement of Science, twice through papers read by myself—in 1854* and 1879†—and once on the report of a committee appointed at the Sheffield meeting in 1879, to inquire into this very subject and report, which they did at Swansea the year afterwards, making the following recommendations:

1. That parliamentary grants be made for the education of the deaf on the "German" system.

2. That the grants be made to meet all the educational needs of any given district or locality, and that a sum in proportion to the number of deaf pupils therein be appropriated for their benefit.

3. Aid to training colleges or grants to approved students desiring to be trained.

Besides this, the subject has been frequently adopted into the programmes of other societies, large and small, metropolitan and provincial, as the Society of Arts, the Statistical Society of London, the Church Congress, the International Medical Congress held in London last year; local societies at Gloucester, Liverpool, and Manchester; conferences both of governing bodies of institutions and of the head masters and other effective members connected directly with the work of teaching or management (in 1877, 1881, and 1882;) and, with far more striking results than anywhere else, at an International Congress held at Milan two years ago, at which I was officially present, when the "pure oral" system was exemplified in its pupils, advocated by its teachers, and approved by the consensus of many nations and by a vote of 160 to 4, in a manner which unquestionably effected in one week what it might have taken another quarter of a century to bring to pass.‡ Well might *The Times* say, in reviewing its own report of the proceedings:

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* *The Census of the Deaf and Dumb in* 1851. See *Journal of the Statistical Society of London*, June, 1855; and *American Annals of the Deaf and Dumb* for January, 1856.

† *The "German" (Speech and Lip-Reading) System of Teaching the Deaf.* London: W. H. Allen & Co. 1879.

‡ See "*Speech for the Deaf*," *Essays, Proceedings, and Resolutions of the International Congress on the Education of the Deaf*, held at Milan, September 6–11, 1880. London: W. H. Allen & Co. 1880.

No more representative body could have been collected than that which at Milan has declared for oral teaching of the deaf—and for nothing but oral teaching. * * * The resolution (it continues) was the act of the representatives of countries which have hitherto countenanced the language of signs. The result (it adds) is a virtual unanimity of preference for oral teaching which might seem to overbear all possibility of opposition.—*Times'* Leader, September 28th, 1880.

It is of course perfectly well known that the system of teaching long prevalent in this country is that which addresses the eye of the deaf child by "signs" and the finger alphabet—the "French" system. In some schools and by some teachers articulation was also taught, but always in combination with signs or the manual alphabet—the "combined" system. Divided attention led to the usual result, and one of the *discoveries* of recent experience has been this fact—that the habitual use of signs will certainly stifle excellence in speech, just as a parasite kills the young tree upon which it fastens. The "sign system" and the "speech system" cannot exist together; the latter, the "pure oral," must stand by itself, and must reign by itself. To "combine" it with any other—necessarily inferior—system is to degrade it, and "to degrade it is to kill it." This is the answer to be made to those who say—"Articulation is not new; it has been tried before; it did not answer; it took up too much time; very few of those who learned it liked it; they seldom or never kept it up; their speech was not agreeable in many cases, and not clearly intelligible in others." So say objectors. Now all that is quite true. But true of what? Of the "German" or "pure oral" system? Certainly not. *That* was never tried in this country until recent years, and its proper merits cannot therefore be called into question. The system of which this *is* true, and of which it always *must be* true, is the "combined" system of articulation along with signs, where *Signs* are the means of communication—not *Speech*—and a lesson in articulation is given, as an extra, an accomplishment, instead of being made the channel through which all other knowledge should be given.

Reasoning from such data it is asserted that very few of the deaf can be taught to speak. But is this so? Opponents of the "pure oral" system have of late years considerably modified their opinions; the proportion of possibility which they admit having gone up from 5 per cent. to 75 per cent,; yet even those

who place the proportion at the highest continue to assert that the "pure oral" system, as the general system of instruction, is inapplicable. This is the point I want to bring out. It has been repeated with confidence, received without hesitation, and is held by those who have only imperfect knowledge as unquestionable truth. Now, I shall not argue with this opinion—and it is only an opinion—but contradict it boldly and refute it by facts. It will be something new and striking to an English audience to find that the weight of authority and the immense preponderance of numbers are entirely the other way. To maintain that any system of teaching is impracticable when it is at the very moment in actual practice in all the schools of some countries, in nearly all of other countries, and in a continually increasing number in every country, is a form of argument, or rather of assertion, which will not long survive the ordeal which is before it.

The schools for the deaf throughout the world are, according to the latest available returns, (*American Annals* for January, 1882,) 364 in number, though I am disposed to think that they are not really far short of 400.

In answer to direct inquiry they themselves set up their claim to be classified as follows:

System of teaching.		Proportion to the whole 364.	Containing pupils.	Teachers.
Oral	191	= 52.47% or 5-9ths	10,506	
Manual	28	= 7. 7% " 1-13th	1,574	
Combined	78	= 21.15%	9,887	
Transition	15	= 4.12% " 1-4th	1,179	2,052
Not described	52	= 14. 3% " 1-7th	1,716	
	364		24,862	

The schools "in transition" are those which have avowedly adopted the "pure oral" system for their *new* and all *coming* pupils, but are finishing the instruction of the old pupils by the sign system. This was the plan adopted in Italy so successfully, and it is the plan which should be followed everywhere.

Those "not described" in the table are chiefly in France; yet, at a recent Congress held at Bordeaux it was reported that the number of "oral" schools was—not seven as reckoned in the

above summary, but thirty-four;* both the national institutions—those of Paris and Bordeaux—and a large proportion of the provincial institutions having adopted the "pure oral" system (the *French* Schools thus discarding the "French" system,) in consequence of the decisions of the International Congress of Milan two years ago. The same can be said of many other institutions on both sides of the Atlantic, the classes in the London Board Schools for example, on which model a new school is to be started here by the School Board for Nottingham. More than a year ago it was pointed out that "advances in the direction of 'oral' teaching are now being made by the older institutions" in this and other countries; and the time which has since elapsed has made the statement more emphatically true.

So much for the preponderance of numbers. I have still to refer to the weight of authority. Here the facts are significant enough. The oldest teachers of the deaf in England, France, and Italy, the ablest and best known teachers in almost every country, are adherents and advocates of the "pure oral" system. Some sooner, some later, have abandoned the method which they had practised all their lives, and adopted that to which they had been all along opposed. This is true of (1st) the oldest teachers in Italy, the Abbés Pendola, of Siena, and E. Ghislandi, of Milan; (2d) of the oldest teacher in France, M. Léon Vaïsse, the late (and still the honorary) Director of the National Institution of Paris; (3d) the oldest head-master in Great Britain, Mr. Andrew Patterson, of the Manchester School for the Deaf and Dumb; (4th) the oldest proprietors and teachers of private schools for deaf pupils in this country, Miss Hull, of Kensington, and Rev. Thomas Arnold, of Northampton; and, not to lengthen the list, the oldest living members of the teaching staff of the London Asylum, Old Kent Road, the Rev. Wm. Stainer, Superintendent of the London School Board classes for the deaf, and myself. To these add, if not the oldest, still some of the ablest and best known teachers in the world—the Abbé Balestra, of Como; the Abbé Tarra and Signor Fornari, of Milan, the President and the General Secretary of the International Congress; the late—alas! that I must say "the late"—

* Some of the schools reported at Bordeaux as "pure oral" were more correctly described in the *Annals* table, to which Dr. Buxton refers, as in "transition."—Ed. Annals.

Padre Marchió,* of Siena; the Abbé Guerin, of Marseilles, and a host of others, well known throughout the profession as able teachers, and, after the Congress of Milan, as equally able advocates of the system and the work to which they have devoted their lives. I have restricted myself to the naming of those who had made their reputation as teachers under the sign system before adopting the "pure oral," otherwise I could not in justice omit to name the eminent men who have, from first to last, been the firm advocates and the faithful teachers of the "German" system, and to whom it must be a matter of inexpressible satisfaction now to see the system so long and persistently spoken against winning its way to appreciation and adoption everywhere.

But to adopt it with success it must be worked wisely and with a due adaptation of means to ends. It will not be enough to run up the flag of "pure oral" teaching because it is becoming popular, and think that by changing your colors you change your principles and practice. The better system prescribes its own conditions, and can only live and prosper under those conditions. It requires the separation of pupils, small classes, a lengthened term of instruction, and, for superior teaching, superior teachers. These teachers must be trained. Trained teachers are the necessity of the times. If you try to do the work with imperfect instruments you will fail. Teachers of the deaf are not born but made, though the qualities which have made so many men and women successful teachers of the deaf are God's gifts, but they must be shaped and sharpened for use by man's device—guided of course by knowledge and by experience—as in every other profession.

With trained teachers success may be looked for with confidence; *without* them you will not only fail in your efforts, but will unjustly discredit the system, by throwing upon it the blame which will be due alone to the rashness and the parsimony which led to the employment of instruments utterly inadequate to do the work demanded of them.

Some years ago this question of the want of good teachers and teaching was under discussion in one of the large institutions of this country, between a visitor and the head master.

* For an account of the work of the late Padre Marchió and the Institution at Siena, see *Macmillan's Magazine* for October, 1882, *Article* "EPHPHATHA."

The visitor suggested the utility of a Training College. The principal replied, "If you will train teachers, I will find situations for them." Those words bore fruit. Years afterwards the Training College for Teachers of the Deaf was founded which has now been for four years in active operation in Ealing. Of the two speakers in that conversation, who are both present, one is the founder of the College, and its Hon. Secretary; the other is the Secretary of the College, and the writer of these words.

With a few explanatory words I will conclude. We are prepared to receive all comers, of both sexes, desirous of devoting themselves to the teaching of the deaf on the "German" system. Our programme includes female resident students, and non-resident students, both male and female. We train as private governesses, and as class teachers, requiring previous proof of satisfactory education, and training for an examination, the passing of which entitles to a certificate. We have our Principal and Vice-Principal, and a small practising school affording knowledge and experience with children of various grades of progress. We have a fund from which grants are made by way of loan to those who cannot afford to pay the entire amount of fees at once.

Our Training College, I must also add, is "wholly undenominational." The wisdom and foresight of this arrangement are already shown by the fact that those most zealous to apply and pursue the "German" system, in the schools they so energetically support, are the Jews and the Roman Catholics.

For this our work we need and we earnestly plead for public support, for we are doing a public work. But we further plead for national support, since we are doing a national work. And we look to the Chairman and others co-operating with him in Parliament, as well as to Associations like this—friends of education and sympathizers with the deaf in their deprivation and in their needs—that this national work may be placed upon a national basis.

THE INSTITUTIONS FOR THE DEAF AND DUMB OF THE WORLD.

BY THE EDITOR.

We published a year ago a list of the institutions of the world as complete as we were able to make it at that time, giving some

of the most important statistics concerning each institution. We did not venture to hope that it was free from error; but we trusted that it would elicit such corrections and additions as would enable us to make an accurate list this year. With that end in view we sent a copy to every institution, with the request that any errors or omissions discovered might be made known to us. The replies received from all parts of the world gave gratifying assurances of the general accuracy of our table, as well as of the hearty appreciation with which our work was everywhere received.

It was our purpose to publish a similar table in the present number of the *Annals*, embodying such corrections and additions as might have been brought to our notice by correspondence and otherwise; but these, on the whole, have been so few and unimportant that it seems unnecessary to devote the space requisite for an entire new table, a large part of which would be a mere repetition of that published last year. Except, therefore, in the case of countries from which considerable additional information has been received, we merely indicate the *corrigenda* and *addenda* to last year's table, and give at the end a revised summary of the whole.

Australia.—The South Australia Institution is not within the city limits of Adelaide, but at Brighton, near Adelaide. The principal is Robert (not James) Hogg. There are 8 male and 6 female pupils and 2 teachers. The method of instruction is manual.* The Institution is supported by the State, voluntary contributions, and pay pupils.

Austria-Hungary.—The private school conducted by Mr. Adalbert Lehfeld at Hürteldorf, near Vienna, was transformed November 15, 1881, into the "Lower Austria Institution," and removed to Ober-Döbling, near Vienna. Mr. Lehfeld is the principal. There are 22 male and 12 female pupils, and 4 teachers, 3 male and 1 female. The method of instruction is oral. The new Institution is supported by the State.

Belgium, Brazil, Denmark, Germany, Portugal, Spain, Switzerland.—No changes have been reported from these countries.

Canada, Courland, Finland, Luxembourg, Mexico, New Zealand, Norway, Russia, United States.—New tables, based

* For an explanation of the terms *manual*, *oral*, *combined*, and *transition*, as used in this article, see the last volume of the *Annals*, pp. 32, 33.

in all cases upon information received directly from the heads of institutions, are published in the present number of the *Annals*.

France.—Mr. Auguste Houdin published in March last a table of the French Institutions, containing fuller and more recent information than ours of last year. He reports as "pure oral" some institutions which were more correctly designated in our table as in "transition;" but as this is not a difference of great importance, and as we have not the most recent information from some of them, we follow him in this. We use the term "oral," however, instead of "pure oral," in order to bring the table into harmony with our reports from other countries, and also as being more accurate. The term "pure oral" should be restricted to those institutions in which "the school-room is a sanctuary from which *every means but speech* is excluded,"* in distinction from those admitting natural signs or gestures in the early instruction of their pupils. Some schools which, "while admitting speech as the superior means and end of education, give in principle more or less place and action to the sign-language," Mr. Houdin records as "oral;" these come under our designation of "combined." With these modifications, and a few others based on information received from correspondence with the heads of institutions, we reproduce Mr. Houdin's table.

Great Britain and Ireland.—The Editors of the Proceedings of the Conference of Head-Masters held in 1881 prefixed to their Report, published in January, 1882, a table of the institutions of the country, containing later and fuller information than ours. We give that table, omitting some of its items, but inserting the methods of instruction, and making some additions for which we are indebted to the kindness of Dr. Buxton.

Italy.—The Institution at Modena, under the charge of Mr. Pollastri, has 22 male and no female pupils; that under the charge of Mr. Giannasi has 32 female and no male pupils.

Japan.—In the location of the first Institution named in our table last year for Tokio read Jokio, and for Kiota read Kioto.

Netherlands.—The Institution at Groningen uses the oral, not a combined, method.

Sweden.—The new table given is taken, with some modifications, from the *Tidskrift* for January, 1882.

* Address of the Abbe Tarra at the Milan Convention, 1880.

Tabular Statement of the Institutions of the World.

FRANCE.—1882.

Location.		Date of Establishment.	Principal.	No. of pupils.	Method of Instruction.	Character.
Department.	Town.					
Ain	Bourg (male)	1856	Abbé Goyatton	30	Oral	Departmental.
Do	...do...(female)	1847	Sœur M. Espérance	30	...do	Regional.
Aisne	Soissons	1840	Abbé Bourse	152	...do	Regional.
Algérie	Alger	1872	Mr. Gilb. Chargebœuf	15	Manual	Communal.
Alpes-Maritime	Nice					
Alpes-Hautes	Gap		Sœur Théodosie			
Do	Embrun		Mlle. Guien			
Aveyron	Rodez	1810	Abbé Roquette	43	Oral	Regional and departmental.
Bouche-du-Rhône	Marseilles	1819	Abbé Dassy	57	...do	Private.
Calvados	Caen (male)	1817		37	...do	Private.
Do	...do..(female	1817		42	...do	Private.
Cantal	Aurillac	1845	Mr Martin	24		
Côtes du-Nord	Saint-Brieuc	1836	Abbé Bertho	90	Manual	Diocesan.
Doubs	Besançon (male)	1824	Frère Romule	70	Combined	Departmental.
Do	...do..... (female)	1819	Sœurs Sagesse	70	Oral	Departmental.
Drome	Saint-Laurent-en-Royans		Sœurs Providence	70		
Eure-et-Loire	Nog nt-le-Rotrou	1808	Abbé Perrebois	50		
Gard	St.-Hyppolite-du-Fort	1856	Rev. E. Rayroux	55	Oral	Protestant.
Do	Villeneuve					
Garonne (Haut)	Toulouse	1826	Abbé Duhagon	150	Oral	Diocesan and regional.
Gironde	Bordeaux (male)	1870	Abbé Gaussens	50	Combined	Departmental.
Do	...do.....(female)	1875	Mr. Gust. Huriot	200	Oral	National.
Herault	Montpellier	1850		70	Combined	Private.
Ille-et-Vilaine	Fougères	1846	Mr. Brissière	49	Oral	Do.
Indre	Déols	1846				
Isère	St.-Laurent-du-Pont	1870	Frère Paul	40	Oral	Private.
Do	Vizille	1847	Mme. M Lentillon			
Loire	St.-Etienne (male)	1843	Frère Vimin	80	Combined	Private.
Do	...do..... (female)		Sœurs de Nevers			
Do	Moingt	1864		35		
Loire (Haute)	Le Puy (male)	1818	Frère Marie-Pierre	55	Oral	Private.

Do.	....do....(female)					
Loire (Inférieure)	Nantes	1834	Frère Louis	40	Combined	
Loiret	Orleans (male)	1839	Frère Joachim	52	Oral	Regional.
Do.	....do ....(female)		Sœurs Sagesse	50	....do	Private.
Lot	Gramat			18		
Maine-et-Loire	Angers	1783	Sr. Félic. Charnaci	50	Combined	
Manche	Pont-l'Abbé	1845	Abbé Ecroun	47		
Mayence	Laval	1835		71	Combined	Departmental.
Meurthe	Nancy	1828	Mr. Piroux	80	....do	Do.
Morbihan	Auray	1807	Sœurs Sagesse	60	Oral	Private.
Nord	Lille (female)		Sœurs Sagesse		....do	
Do.	Ronchin-Lille	1834	Frère Mesmin	95	....do	Private.
Orne	Alençon	1851	Sœurs Providence	49	Combined	Do.
Pas-de-Calais	Arras	1817		101		
Puy-de-Dôme	Chaumont	1833	Mr. A. Hugonnet	21	Combined	Private.
Do.	Clermont (male)	1871	Frère Jacques	31	Oral	Regional.
Do	....do ....(female)		Sœur Béatrix			
Do.	Veyre-Monton	1860	Sœurs St.-Dominique	60	Oral	
Rhône	Lyons	1824	Mr. C. Forestier	90	Manual	
Do.	....do	1872	Mr. J. Hugentobler	10	Oral	Private.
Savoie	Chambéry	1841		90	....do	National.
Seine	Paris (National)	1765	Dr. Peyron	270	....do	Do.
Do.	....do..(Blanchet)*	1849–55		60	Combined	Communal.
Do.	....do..(Dubois)	1840	Mr. Benj. Dubois	6	....do	Private.
Do.	....do..(Grosselin)†	1865–80		77	Phonomimic	Private and communal.
Do.	....do. (Houdin)	1854	Mr. Aug. Houdin	18	Oral	Private.
Do.	....do..(Percire)	1875	Mr. Magnat	60	Oral	Do.
Do.	Bourg-la-Reine		Sœurs N.-D. Calvaire	35	Combined	Do.
Do.	Department (Grosselin)‡	1865–80		11	Phonomimic	Private and communal.
Seine-et-Marne	Fontainebleau					
Seine-Inférieure	Rouen		Mlle. Lefebvre	50		
Tarn	Albi	1829	Sœur Massol	59	Manual	
Vaucluse	Villeneuve-Avignon			25	Combined	Private.
Vienne	Poitiers	1838	Frère Médéric	80	Oral	Regional and private.
Do.	Larnay	1833	Sœurs Sagesse	76	....do	Private.
Departments	Departments (Grosselin)¶	1865–80		76	Phonomimic	Private and communal.
Sixty-seven Institutions in France				3,482		

* 7 common schools in which 60 deaf children are instructed with hearing children.
† 36 " " " 77 " " " "
‡ 8 " " " 11 " " " "
¶ 62 " " " 76 " " " "

Tabular Statement of the Institutions of the World—Continued.

GREAT BRITAIN AND IRELAND.—1882.

Location.	Date of Establishment.	Head of the Institution.	Number of Pupils.					Number of Teachers.			Method of Instruction.
			Total.	Male.	Female.	Boarders.	Day scholars.	Male.	Female.	Deaf.	
Public Institutions. *England and Wales.*											
Old Kent Road, London	1792	Richard Elliott (Head Master)	70	39	31	70	.....	5	3	0	Oral.
Margate	1862		241	130	111	241	.....	11	7	2	Combined.
Edgbaston, Birmingham	1812	Edward Townsend	108	60	48	108	.....	2	5	4	Do.
Old Trafford, Manchester	1823	Andrew Patterson (Head Master)	80	81	74	155	.....	10	5	1	Combined.
	1882	W. S. Bessant (Master Oral School)	75								Oral.
Oxford street, Liverpool	1825	James Gibbs	107	61	46	72	35	4	3	0	Combined.
Exeter	1826	John T. Hobbah	38	22	16	38	.....	2	.....	1	
Doncaster	1829	James Howard	152	90	62	152	.....	6	4	2	Combined.
Newcastle-on-Tyne	1838	William Neill	95	48	47	95	.....	5	1	1	Do.
Brighton	1842	William Sleight	85	43	42	85	.....	3	4	3	
Tyndall's Park, Bristol	1841	William B. Smith	43	26	17	43	.....	1	2	1	Manual.
Bath	1844	Miss Elwin (Hon. Sec.)	13	4	9	13	.....	.....	3	1	Combined.
Swansea, Wales	1847	B. H. Payne (Principal)	40	24	16	40	.....	1	1	1	Do.
Lower Clapton, London*	1851		34	.....	34	34	.....	1	3	0	
Llandaff, South Wales	1862	Alexander Melville	19	11	8	19	.....	2	1	2	Manual.
Walmer Road, Notting Hill, London	1864	S. Schöntheil	25	17	8	22	3	2	1	0	Oral.
11, Fitzroy Sq., London, W	1871	William Van Praagh (Director)	66	36	30	.....	66	2	6	0	Do.
Boston Spa, Tadcaster, Yorkshire	1877	Monsignore de Haerne	97	55	42	97	.....	.....	8	0	Combined.
Somerford street, Bethnal Green; Winchester street, Pentonville; Turin street, Bethnal Green; Victory Place, Walworth; Bell st., Edgware Road; Farncombe street, Bermondsey.	1874	Rev. W. Stainer (Superintendent of Instruction under London School Board.)	186	92	94	.....	186	1	14	0	Oral.
Spring Bank, Hull	.....	Walter MacCandlish	19	10	9	7	12	1	.....	0	Manual.
Castlebar Hill, Ealing, W.	1878	A. A. Kinsey (Principal)	11	5	6	8	3	2	.....	0	Oral.
Division street, Sheffield	1879	Geo. Stephenson	29	17	12	.....	29	1	.....	0	
Leeds	1881	Joseph Morton	20	10	10	.....	20	1	.....	0	
Twenty-six Institutions in England and Wales			1,653	881	772	1,299	354	63	71	19	

Scotland.										
Henderson Row, Edinburgh	1810	James Bryden	60	33	27	60	.....	3	1	1	Combined.
Cathcart, Glasgow	1819	John Thomson	140	82	58	140	.....	3	6	1	Do.
Belmont street, Aberdeen	about 1826		18	14	4	12	6	1	1	0	Manual.
Dundee	1846	James Barland	19	12	7	19	.....	1	.....	1	Do.
Edinburgh	1850	Alfred Large	118	68	50	118	.....	5	3	0	Combined.
Lanark	1871	Sister Teresa Farrell	27	10	17	27	.....	.....	3	0	
Greenock	1878	S. Littlefield	4	.....	4	.....	4	.....	1	0	Oral.
Seven Institutions in Scotland			386	219	167	376	10	13	15	3	
Ireland.											
Dublin (Claremont)	1816	Edward W. Chidley (Head Master)	43	23	20	43	.....	2	3	0	Manual.
Belfast	1831	Rev. J. Kinghan (Principal)	105	67	38	100	5	5	1	2	Combined.
Cabra, Dublin	1846	The Christian Brothers	190	190	.....	190	.....	12	.....	0	Manual.
Cabra, Dublin	1846	Under the care of the Dominican Nuns	207	.....	207	207	.....	.....	20	3	Do.
Four Institutions in Ireland			545	280	265	540	5	19	24	5	
Thirty-seven Public Institutions			2,584	1,380	1,204	2,215	369	94	108	27	
PRIVATE SCHOOLS.											
27, Alexandra Villas, Finsbury Park, N	1856	William Stainer	8	8	.....	8	.....	2	.....	.....	Oral.
Fair View, Cliftonville, Northampton	1860	Thomas Arnold	9	7	2	9	.....	2	.....	.....	Do.
89, Holland Road, Kensington, W	1862	Miss Susanna E. Hull	12	6	6	12	.....	.....	2	.....	Do.
Inglefield, Brondesbury, N W	1866	John Barber	12	6	6	12	.....	1	2	.....	Do.
8, Burlington Buildings, Redland, Bristol	1869	Mrs. Thomas	7	4	3	7	.....	1	2	.....	
56, Gresham Road, Brixton, S.W	1878	Sophia M. Rhind	3	.....	3	1	2	.....	1	.....	Oral.
125, High street, Garnet Hill, Glasgow	1881	Miss Griffiths	9	.....	9	5	4	.....	1	.....	Do.
3, Notting Hill, London, W	1881	Miss Fanny C. Howe	3	.....	3	.....	.....	.....	1	.....	Do.
Aston Park, Birmingham	1882	Miss Rutherford	3	2	1	.....	3	.....	1	.....	Do.
Nine Private Schools			66	33	33	54	9	6	8	.....	
Forty-six Institutions in Great Britain and Ireland			2,650	1,413	1,237	2,269	378	100	117	27	

* This is also an Asylum and a Home for females of adult age.

Tabular Statement of the Institutions of the World—Continued.

LUXEMBOURG.—1882.

Location.	Date of Establishment.	Principal.	No. of Pupils. Male.	No. of Pupils. Female.	No. of Teachers.	Method of Instruction.	How Supported.
Kham, Luxembourg	1880	John Kimmer	15	14	3	Oral	State and pay pupils.

MEXICO.—1882.

Mexico	1873	Ramon I. Alcaraz	23	7	7	Manual	State.
Zecatecas	1881					do	Do.

NEW ZEALAND.—1882.

Sumner, Christchurch	1879	G. Van Asch	13	9	2	Oral	State and pay pupils.

NORWAY.—1882.

Trondhjem	1824	H Finch	29	30	11	Combined.	State and pay pupils.
Christiania	1848	Fred. G. Balchen	50	44	11	Oral.	Private, with State aid.
Christiansland	185-	Ernest H Zeisler	44	26	6	do	Do. do.
Bergen	1850	Nils C. Waagle	32	28	6	do	Do. do.
Christiania	1881	Mrs. H. Rosing				Do.	
Hamar	1882	E. H. Hofgaard				Do.	
Trondhjem	1882	J. Lyng				Do.	
Seven Institutions in Norway			155	128	34		

RUSSIA.—1882.

St. Petersburg	1806					Oral	State.
Warsaw	1817	John Paplonski	135	65	18	Combined	State and endowment.
Odessa	1843	Mrs. Lydia Mitkevitch	10	16	2	Oral	State and charitable contributions.
Moscow	1860	Mr. Organoff	95	39	14	Oral	Charitable contributions.
Warsaw (Day-School)	1880	John Paplonski	70	25	5	Combined	State and endowment.
Mitau, Courland	1870	Carl Krause	24	14	5	Oral	State, voluntary contributions, and pay pupils.
Borga, Finland	1846	Achilles Sirén	14	16	3	Manual	State and pay pupils.
Abo, Finland	1860	Adolf E. Nordman	43	23	5	do	Do. do.
Knopio, Finland	1862	Kust Killinen	9	10	5	Oral	Do. do.
Pedersöre, Finland	1863	Anna Heikel	13	13	2	Manual	Do. do.
Ten Institutions in Russia, Courland, and Finland			363	221	59		

SWEDEN.—1881.

Manilla	1812	O. Kyhlberg, F. D.	77	52	14	Combined	State, vol'y contrib's, and pay pupils.
Karlskrona	1858	Sofia Ulfsparre	23	15	5	do	State, district, and pay pupils.
Göteborg (Nya Varfvet)	1859	S. A. Sjögren	20	14	4		Do. do.
Hjorted	1859	Rev. J. Ostberg	20	11	4	Combined	Do. do.
Stockholm	1860	Jeanette Berglind	7	10	4		Do. do.
Göteborg	1862	P. Brodahl	14	6	3		State and pay pupils.
Rephult	1862	L. B. Fæltenborg	24	6	4		State, district, and pay pupils.
Hermösand	1867	S. Lagerström	24	8	3		Do. do.
Lund	1871	A. G. Flodin	49	17	8	Combined	Do. do.
Falun	1873	A. A. Berg	12	8	3	Oral	Do. do.
Gumpetan	1 74	Th. Kaijser	18	14	3		Do. do.
Hamre vid Bollnäs	1874	J. Prawitz	6	6	1		State and pay pupils.
Orebro	1875	J. Blomkvist	15	10	4	Oral	State, district, and pay pupils.
Venersborg	1877	S. Kinman	8	15	3	do	Do. do.
Vadstena	1878	E. A. Zotterman	44	15	4	Manual	State.
Skara	1879	F. Nordin, F. K	28	24	5	do	Do.
Bollnäs	1880	C. Kierkegaard-Ekbohrn, M.A.	32	28	4	Combined	Do.
Seventeen Institutions in Sweden			421	259	76		

Tabular Statement of the Institutions of the World—Continued

UNITED STATES.—1882.

	Name.	Location.	Date of opening.	Chief Executive Officer.	No. of Pupils. During the year.	Male.	Female.	Semi-mute.*	Present Dec. 1, 1882.	No. of Instructors.† Whole No.	Male.	Female.	Deaf-mute.‡	Semi-mute.*
1	American Asylum	Hartford, Conn	1817	Job Williams, M. A., Principal	205	119	86	.....	187	16	7	9	2	1
2	New York Institution	Washington Heights, New York, N. Y.	1818	Isaac Lewis Peet, LL. D., Principal; Wm. Porter, M.D., Sup't & Res't Physician.	500	316	184	50	448	20	10	10	5	4
3	Pennsylvania....do	Philadelphia, Pa.	1820	Joshua Foster, Principal	380	210	170	50	318	19	12	7	3	2
4	Kentucky....do	Danville, Ky	1823	D. C. Dudley, M.A., Superintend't	170	91	79	7	141	9	6	3	3	1
5	Ohio....do	Columbus, Ohio	1829	Benj Talbot, M.A., Acting Superintend't.	513	273	240	82	432	26	12	14	9	7
6	Virginia....do.(*n*)	Staunton, Va	1839	W. R. Vaughan, M.D., Principal	101	59	42	9	85	9	8	1	2	1
7	Indiana....do	Indianapolis, Ind.	1844	William Glenn, Superintendent	374	201	173	83	324	18	9	9	4	5
8	Tennessee School	Knoxville, Tenn.	1845	——— ———, Principal	100	63	37	12	100	7	5	2	3	None.
9	North Carolina Inst'n	Raleigh, N. C.	1844	Hezekiah A. Gudger, M.A., do	105	52	53	5	92	8	6	2	3	1
10	Illinois....do	Jacksonville, Ill.	1846	Philip G. Gillett, LL. D., Sup't.	577	329	248	1.6	509	29	8	21	5	2
11	Georgia....do	Cave Spring, Ga.	1846	W. O. Connor, Principal	86	51	35	17	71	5	4	1	1	2
12	South Carolina.do	Cedar Spring, S. C.	1849	Newton F. Walker, Superintendent	48	17	31	7	43	4	3	1	2	None.
13	Missouri....do	Fulton, Mo.	1851	Wm. D Kerr, M.A., do	232	138	94	22	197	12	6	6	2	1
14	Louisiana....do	Baton Rouge, La.	1852	R. G. Ferguson, M.A., do.	50	27	23	8	30	3	1	2	None.	1
15	Wisconsin....do	Delavan, Wis.	1852	John W. Swiler, M.A., do	223	133	90	55	193	10	5	5	2	None.
16	Michigan....do.(*n*)	Flint, Mich	1854	F. A. Platt, M.A., Principal Dan. H. Church, Superintendent	294	159	135	.....	249	15	7	8	3	2
17	Iowa....do	Council Bluffs, Iowa.	1855	Rev. A. Rogers, do	276	171	105	17	267	17	9	8	2	3
18	Mississippi....do	Jackson, Miss	1856	J. R. Dobyns, do	80	45	35	20	68	6	4	2	2	2
19	Texas Asylum (*n*)	Austin, Texas	1857	John S. Ford, do	97	65	32	13	86	6	3	3	3	None.
20	Columbia Institution	Washington, D. C.	1857	E. M. Gallaudet, Ph. D., LL. D., Pres't.	110	95	15	44	86	14	12	2	3	2
21	Alabama....do	Talladega, Ala.	1860	Joseph H. Johnson, M.D., Principal	48	28	20	None.	42	5	4	1	3	None.
22	California....do	Berkeley, Cal.	186	Warring Wilkinson, M.A., do	119	73	46	10	109	9	4	5	3	None.
23	Kansas....do	Olathe, Kansas	1862	G. L. Wyckoff, Acting Superintendent	176	98	78	38	156	9	4	5	3	None.
24	Le Couteulx St. Mary's Inst.	Buffalo, N. Y.	1862	Sister Mary Anne Burke, Principal	156	87	69	24	150	11	None.	11	1	None.
25	Minnesota Institution	Faribault, Minn	1863	Jonathan L. Noyes, M.A., Superintend't.	147	79	68	28	123	9	5	4	2	3
26	Instit'n for Improved Instr'n.	New York, (*a*) N. Y.	1867	D. Greenberger, Principal	169	92	77	23	156	15	2	13	None.	None.
27	Clarke Institution	Northampton, Mass.	1867	Miss Harriet B. Rogers, Principal	99	53	46	21	84	13	None.	13	None.	1

28	Arkansas Institute	Little Rock, Ark	1868	H. C. Hammond, M.A., Principal	80	47	33	6	52	5	2	3	None.	1
29	Maryland School	Frederick City, Md	1868	Chas. W. Ely, M. A., Principal	98	55	43	5	85	10	3	7	3	1
30	Nebraska Institute	Omaha, Neb	1869	J. A Gillespie, B. D , Principal	107	70	37	12	94	7	3	4	1	None.
31	Horace Mann School	Boston, (*b*) Mass	1869	Miss Sarah Fuller, Principal	89	40	49	20	79	9	None.	9	None	None.
32	Whipple's Home School	Mystic River, Conn	1869	J. Whipple, Proprietor	11	9	2	None.	10	2	2	None.	None.	None.
33	St. Joseph's Institute (*f*)	Fordham, N. Y	1869	Mme. Victorine Boucher, President	251	103	130	20	233	20	1	19	1	1
34	West Virginia Institution	Romney, W. Va	1870	J. C. Covell, M. A., Principal	87	52	35	17	65	6	5	1	1	2
35	Oregon School (*n*)	Salem, Oregon	1870	Rev. P. S. Knight do	39	19	20	7	26	3	2	1	1	None.
36	Institution for Colored	Baltimore, (*c*) Md	1872	F. D. Morrison, M. A., Superintendent	15	8	7	.....	11	2	2	None.	1	None.
37	Ev. Lutheran Institution	Norris, Mich	1873	H. D. Uhlig, Principal	39	24	15	.....	39	3	3	None.	None.	None.
38	Colorado Institute	Colorado Sp's, Colo	1874	P. W. Downing, Principal J. R. Kendedy, Superintendent	49	19	30	6	43	4	2	2	None.	2
39	Erie Day-School	Erie, Pa	1874	Miss Mary Welsh, Teacher	12	9	3	None.	10	1	None.	1	None.	None.
40	Chicago Day-Schools (*m*)	Chicago, Ill	1875	P. A. Emery, M. A., Principal	58	33	25	2	48	6	3	3	2	2
41	Central N. Y. Institution	Rome, N. Y	1875	Edward B. Nelson, B. A. do	164	101	63	.....	153	12	9	3	3	5
42	Cincinnati Day School	Cincinnati, (*e*) Ohio	1875	A. F. Wood do	31	21	10	4	25	2	1	1	2	None.
43	Western Penna. Inst'n	Turtle Creek, Pa	1876	John A. McWhorter, M. A. do	124	77	47	7	104	8	3	5	None.	2
44	Western New York Inst'n	Rochester, N. Y.	1876	Z. F. Westervelt do	134	69	65	17	118	17	2	15	1	2
45	Portland Day-School	Portland, Me	1876	Miss Ellen L. Barton do	28	14	14	6	28	4	None.	4	None.	None.
46	St. John's Cath. Institute	St. Francis, Wis	1876	Rev. Chas Fessler do	46	27	19	6	44	3	2	1	None.	None.
47	Rhode Island School	Providence, R I	1877	Miss Katharine H Austin, Principal	33	16	17	12	27	3	None.	3	None.	None.
48	Mr. Knapp's School (*i*, *n*)	Baltimore, (*g*) Md	1877	Frederick Knapp, Principal	30	17	13	.....	30	3	1	2	None.	None.
49	Phonological Institute	Milwaukee, (*k*) Wis	1878	Adam Stettner, Principal	23	14	9	2	23	2	1	1	None.	None.
50	St. Louis Day-School	St. Louis, (*l*) Mo	1878	D. A. Simpson, B. A., Principal	52	31	21	4	43	3	1	2	1	2
51	N. E. Industrial School	Beverly, Mass	1878	William B. Swett, Superintendent	19	11	8	1	18	2	1	1	1	None.
52	School of Articulation (*n*)	Marquette, Mich	1879	Mrs. A. M. Kelsey, Principal	3	1	2	1	2	1	None	1	None.	None.
53	Scranton Day-School	Scranton, Pa	188	Jacob M. Koehler, Principal	10	5	5	None.	9	1	1	None.	None.	1
54	Dakota School	Sioux Falls, D. T	188	James Simpson, Superintendent	21	14	7	3	17	2	2	None.	None.	2
55	Oral Branch Pa. Inst'n	Philadelphia, (*o*) Pa	1881	Miss Emma Garrett, Teacher in charge	48	33	15	4	48	6	None.	6	None.	None.
55	Institutions in the U. S	.....	.....	.....	7155	4,085	3,070	1,723‡	6,235	481	209	272	89	65
	National College¶	Washington, D. C	1864	E. M. Gallaudet, Ph. D., LL. D., Pres't.	46	46	None.	33	34	7	7	None.	None.	2

* Under this head are included the semi-deaf and all the deaf who have acquired some knowledge of language through the ear.
† Including the principal. ‡ Not including the semi-mute teachers. ‡ Number in 50 institutions, containing 6,572 pupils.
¶ The National Deaf-Mute College is a distinct organization within the Columbia Institution. Its officers and students are included in the statement of the Columbia Institution given above (*a*) Lexington Ave., bet. 67th and 68th sts. (*b*) No. 63 Warrenton street. (*c*) No. 258 Saratoga street. (*e*) Franklin street, near Main. (*f*) This Institution has three branches; one situated at Fordham, another at Brooklyn, (510 Henry street,) and another at Throgg's Neck, Westchester county, N. Y. (*g*) Nos. 29, 31, and 33 Holliday street. (*i*) School for hearing youth, but having classes of deaf-mutes. (*k*) 594 National avenue. (*l*) Cor. 9th and Wash streets. (*m*) There are five schools in different parts of the city. Mr. Emery's address is 319 Fulton street. (*n*) For the year 1881. (*o*) S. E. Corner 17th and Chestnut streets.

Tabular Statement of the Institutions of the World—Continued.

UNITED STATES—Continued.

	Name.	Method of Instruction.	School-hours.	Trades.	How Supported.	Value of buildings and grounds.	Expend're last fiscal year. For support.	Expend're last fiscal year. For build'gs. and gro'ds.	No. vols. in library.	Tot. No. pupils have received instruct'n.
1	American Asylum	Combined.	9 to 12 and 2 to 4	Cab., Sh., Ta	Endowment and N. E. States	250,000	46,242	2,779	2000	2303
2	New York Institution	do.	8 to 12 and 1 to 5†	Car.,Cab.,Bak ,Dr. Ga ,Pa.,Pr.,Sh.,Ta	State, counties, and pay pupils	524,000	130,680	11,734	3985	2957
3	Pennsylvania	do.	8½ to 11½ and 1½ to 3½.	Dr.,Li ,Sh.,Ta	State and pay pupils.	500,000	75.899	6,291	5000	2034
4	Kentucky	do.	8 to 1 [to 5‡	Bo., Br., Car., Ga., Ma., Pr., Se.	State	175,000	31,071	38,000	700	803
5	Ohio	do.	7½ to 9¾, 10½ to 12¾, 2	Bo., Car., Pr., Sh	do	500,000	84,892	27,000	2000	1945
6	Virginia*	do.	8½ to 1½	Bo., Car , Pa., Pr., Sh., Ta.	do	175,000	20,000		500	530
7	Indiana	do.	7¾ to 1	Cab., Ch., Sh	do	457,510	52,819	2,982	3172	1451
8	Tennessee School	do.	9 to 12 and 1½ to 3½	Pr., Sh	do	150,000	23,000		300	
9	North Carolina Institution*	do.	8 to 2	Cooking, Sh., Se	do	100,000	34,000	6,000	1500	
10	Illinois	do.	8 to 11 and 12,1 to 3 and 4½	Bak.,Cab.,Ga.,Pr., Sh., Wt.	do	318,000	85,000	3,000	5274	1619
11	Georgia	do.	Manual	8 to 1	Sh	do	30,000	19,107	1,500	1000	330
12	South Carolina*	do.	Combined.	8 to 1	Pr., Sh., Se	do	40,000	9,616	3,947		177
13	Missouri	do.	do.	8 to 1	Cab., Pr., Sh	do	135,500			1008	797
14	Louisiana	do.	do.	8 to 1	Car., Pr	do	25,000	10,000	5,000	275	
15	Wisconsin	do.	do.	7¾ to 12½ and 1½ to 4½	Ba., Pr., Sh	do	87,012	36,280	1,413	500	626
16	Michigan	do.	do.	8½ to 11½ and 1 to 4	Cab., Pr., Sh	do	377,525	46,916	2,312	130	717
17	Iowa	do.	do.	8 to 12 and 1¼ to 2¼	Br.,Cab.,Fa.,Pr.,Sh	do	171,669	48,375	5,000	473	643
18	Mississippi	do.	do.	8 to 1½	Car., Pr., Sh	do	60 000	10,000	20,000	300	148
19	Texas Asylum	do.	do.	8½ to 1½	Ma., Pr., Sh	Endowment and State	80,000	14,257	7,000	195	203
20	Columbia Institution	do.	do.	8¼ to 12¾ and 2 to 3	Cab	United States and pay pupils.	650,000	58,149	8,424	2900	473
21	Alabama	do.	do.	8 to 1	Cab , Ch., Sh	State	60,000	10,886		500	175
22	California*	do.	do.	8 to 1	None	do	339,000	41,500	45,000	400	244
23	Kansas	do.	do.	8¾ to 12 and 1¼ to 3	Cab., Pr., Se., Sh	do	55,000	25,000	None.	256	339
24	Le Couteulx St. Mary's Inst.	do.	do.	8 to 12 and 1½ to 4†	Dr., Pr , Ta	State, counties, and pay pupils	58,000	21,000	14,000	550	330
25	Minnesota Institution	do.	do.	8 to 12½	Co.,Dr.,Pr.,Sh.,Ta	State	200,000	26,000	620	1000	314

26	N.Y.Inst.for Improv'd Ins'n	Oral.....	9 to 12 and 1¼ to 3¼.....	None.....	State, counties, and pay pupils.....	290,000	34,966	27,038	.....	284
27	Clarke Institution	.....do.....	9 to 12 and 2 to 4.....	Cab., Se.....	Endowment, State, and pay pupils.....	90,000	28,143	853	939	211
28	Arkansas Institute.....	Combined..	8 to 12½..... [to 4½‡	Pr., Dr., Ga , Sh...	State.....	32,000	15,000	5,000	75	195
29	Maryland School.....	.....do.....	7½ to 9¾, 9¾ to 12½, 2	Cab., Pr., Sh.....	...do.....	250,000	27,818	599	2150	257
30	Nebraska Institute.....	.....do.....	8½ to 12 and 1½ to 3.....	Car., Dr., Pr., Se...	State	61,000	14,899	.....	700	173
31	Horace Mann School.....	Oral.....	9 to 2.....	Se.....	State and city.....	.....	.....	.....	70	200
32	Whipple's Home School	.... do.....	9 to 12 and 1 to 4.....	Ga..... [Ta..	Private.....	.....	.....	.....	300	51
33	St. Joseph's Institute.....	Combined..	9 to 12 and 1½ to 3½.....	Ba.,Dr.,Fa.,Se.,Ga.	State, counties, and pay pupils.....	151,310	42,666	15,338	500	333
34	West Virginia Institution*..	.....do.....	8½ to 1½.....	Cab., Pr., Sh., Ta..	State.....	80,000	27,054	..;None..	631	193
35	Oregon School.....	Manual.....	9 to 12 and 1 to 3.....	None.....	...do.....	1,200	4,000	1,190	.....	61
36	Md. Inst'n for Colored*.....	.....do..... ..	8 to 1.....	Br., Ch.....	...do.....	25,000	.....	.....	.....	34
37	Ev. Lutheran Institution....	Oral.....	6 hours.....	None	Ev. Luth. Conference of N. America...	20,000	.....	700	.....	79
38	Colorado Institute.....	Manual.....	8 to 1.....	Car.,Dr.,Ga.,Pr.,Sh	State.....	52,500	10,000	22,000	50	65
39	Erie Public Day-School.....	Oral.	9 to 12 and 1½ to 3½.....	None.....	City.....	.....	.....	.....	.....	23
40	Chicago Day-Schools.....	Manual.....	9 to 12 and 1 to 3½.....	None.....	State.....	.....	.....	.....	.....	120
41	Central N. Y. Institution...	Combined..	9 to 12 and 1½ to 3½.....	Car., Dr., Gl., Sh...	State and counties.....	38,214	47,683	2,658	200	225
42	Cincinnati Day-School.....	Manual.....	9 to 12 and 1½ to 4.....	None.....	...do.....	.....	.....	.....	.....	74
43	Western Pa. Institution.....	Combined..	8½ to 11½ and 1 to 3.....	None.....	...do.....	.....	20,995	15,000	100	165
44	Western N. Y. Institution..	.....do.....	7½ to 10, 10¼ to 12¾, 2 to 4½‡	Cab.,Car.,Dr.,Ga., Gl.,Pa.,Pr.,Se.	...do.....	100,000	34,007	10,766	680	191
45	Portland Day-School	Oral.....	9 to 12 and 2 to 4.....	None.....	City and pay pupils.....	.....	.....	.....	.....	32
46	St. John's Catholic Inst.....	Combined.	8 hours.....	Fa., Pr., Se., Sh.....	Private...	14,000	.....	.....	.....	123
47	Rhode Island School.....	Oral.	9 to 1.....	None.....	State.....	.....	3,000	.....	250	41
48	Mr. Knapp's School.....	.....do.....	9 to 2.....	None.....	Private.....	60,000	.....	.....	.....	.....
49	Phonological Institute.....	... do...	9 to 12 and 1 to 4.....	None.....	Vol. contributions and pay pupils.....	.....	.....	.....	.....	50
50	St. Louis Day-School.....	Manual.....	8¾ to 12 and 1½ to 3¾....	None.....	City.....	.....	.....	.....	.....	72
51	Marquette School.....	Oral.	9 to 12 and 1½ to 3.....	None	Private.....	.....	600	.....	.....	.....
52	N E. Industrial School.....	Combined..	9 to 12 and 2 to 4.....	Farming.....	Voluntary contributions	9,000	2,700	200	200	25
53	Scranton Day-School.....	Manual.....	9 to 11¾ and 1½ to 3½....	None	City.....	.....	.....	.....	.....	16
54	Dakota School.....	.....do	9 to 12 and 2 to 4.....	Gardening.....	Territory.....	8,000	2,455	...None..	.....	22
55	Oral Branch Pa. Inst'n.....	Oral.....	9½ to 2.....	None.....	Pennsylvania Institution.....	.....	.....	.....	.....	50
55	Institutions in the U. S.....	.....	.....	.....	.....	.....	.....	.....	.....	22,505
	National College.....	Manual	8 to 12¼ and 1½ to 3.½ ..	None.....	Columbia Institution.....	.....	.....	.....	2400	242

* Contains a department for the blind also, the expenses of which are necessarily included in the statement of expenditure.
† One session for school and one for shops, by a system of rotation. ‡ Two sessions for school and one for shops, by a system of rotation.
§ Bak.=Baking. Bas.=Basket-making. Bo.=Book-binding. Br.=Broom-making. Cab.=Cabinet-making. Car.=Carpentry. Ch.=Chair-caning. Co.=Coopery. Dr.=Dress-making. Fa.=Farming. Ga.=Gardening. Gl.=Glazing. Li.=Lithography. Ma.=Mattress-making. Pa.=Painting. Pr.=Printing. Se.=Sewing. Sh =Shoemaking. Ta.=Tailoring. Wt.=Wood-turning.

Tabular Statement of the Institutions of the World—Continued.

CANADA.—1881.

	Name.	Location.	Date of opening.	Chief Executive Officer.	No. of Pupils. During the year.	No. of Pupils. Male.	No. of Pupils. Female.	No. of Pupils. Semi-mute.*	No. of Pupils. Present Dec. 1, 1881.	No. of Instructors.† Whole No.	No. of Instructors.† Male.	No. of Instructors.† Female.	No. of Instructors.† Deaf-mute.‡‡	No. of Instructors.† Semi-mute.*
1	Catholic Inst'n (Male)	Montreal, Can.	1848	Rev. Alf. Belanger, Pt. S. V., Director	150	150	None.	4	122	27	27	None.	4	None.
2	Catholic Inst'n (Female)	Montreal, Can.	1851	Sister Philippe, Superior	215	None.	215	25	215	32	None	32	4	None.
3	Halifax Institution	Halifax, N. S.	1857	J. Scott Hutton, M. A., Principal	81	44	37	3	56	4	3	1	1	None.
4	Ontario ..... do	Belleville, Onta	1870	R. Mathison, Sup rinten dent	303	165	138	14	255	16	8	8	3	1
5	Mackay Institution	Montreal, Can.	1870	Thos. Widd, Principal	36	22	14	9	36	3	2	1	2	None.
6	New Brunswick Inst'n	Portland, N B	1873	A. H. Abell, Principal										
7	Fredericton Inst'n	Fredericton, N. B	1882	Albert F. Woodbridge, Principal	18	16	2	1	18	2	1	1	None.	None.
7	Institutions in Canada				803	397	406	56	703	84	41	43	14	1

	Name.	Method of instruction.	School hours.	Trades.§	How supported.	Value of buildg's and grounds.	Expend're last fiscal year. For support.	Expend're last fiscal year. For build'gs and gro'ds.	No. volumes in library.	Total No. pupils have rec'd instr'n.
1	Montreal Cath. Inst. (Male)	Oral.	8 to 11 and 1½ to 4	Bo., Cab., El., Pr., Sh., Ta., Wt.	Province, labor, and vol. contrib'ns	50,000	32,143	12,000	600	442
2	Montreal Cath. Inst. (Fem.)	Combined.	8½ to 12 and 1 to 3½	Dr., Se.		175,000			2000	500
3	Halifax Institution	do.	9 to 12¾ and 2 to 4	Car., Ga., Pr., Sh.	Maritime provinces and vol. contrib'ns	20,000	6,039	181	400	266
4	Ontario .....do	do.	9 to 12 and 1½ to 3	Car., Dr., Sh., Ta.	Province	152,491	39,928	3,500	1410	598
5	Mackay .....do	do.	9 to 3	Car., Pr.	Province, pay pupils, and vol. contrib's	50,000	6,000	1,200	200	85
6	New Brunswick Institution	Manual								
7	Fredericton Institution	Combined.	9 to 12 and 2 to 4	None		3,000	1,800			18
7	Institutions in Canada									1909

*††‡ See foot-notes on page 57. § See foot-notes on page 59.—El.=Electrotyping.

SUMMARY.

Country.	No. of Institutions.	No. of Pupils. Total.	Male.	Female.	No. of Teachers.	Methods of Instruction. Manual. No. of Institutions.	No. of Pupils.	No. of Teachers.	Oral. No. of Institutions.	No. of Pupils.	No. of Teachers.	Combined. No. of Institutions.	No. of Pupils	No. of Teachers.	Not reported. No. of Institutions.	No. of Pupils.	No. of Teachers.
Australia	3	147	82	65	11	1	14	2	..	..	..	..	..	..	2	133	9
Austria-Hungary	17	1,147	656	454	64	..	..	..	17	1,147	64	..	..	..	..	..	..
Belgium	10	864	482	382	..	..	..	..	5	339	..	5	525	..	..	..	..
Brazil	1	32	32	..	3	..	..	..	1	150	27	5	653	57	1	32	3
Canada	7	803	397	406	84	1	..	..	2	150	23	..	..	..	1	34	3
Denmark	4	326	150	176	41	1	142	15	28	1,962	..	17	871	..	18	395	..
France	67	3,482	..	..	..	4	254	..	90	5,608	580	..	..	..	..	..	..
Germany	90	5,608	1,042	908	580	..	..	..	20	496	56	13	1,356	109	7	240	25
Great Britain and Ireland	46	2,650	1,413	1,237	244	8	558	54	34	1,405	227	1	86	10	..	..	..
Italy	35	1,491	815	676	237	..	..	..	..	..	..	..	..	..	..	..	..
Japan	2	65	37	28	7	2	65	7	1	29	3	..	..	..	..	..	..
Luxembourg	1	29	15	14	3	..	..	..	..	..	..	..	..	..	..	..	..
Mexico	2	30	23	7	7	2	30	7	..	..	..	..	..	..	..	..	..
Netherlands	3	465	256	209	40	..	..	..	3	465	40	..	..	..	..	..	..
New Zealand	1	22	13	9	2	..	..	..	1	22	2	..	..	..	..	..	..
Norway	7	283	155	128	34	..	..	..	6	224	23	1	59	11	..	..	..
Portugal	1	8	7	1	1	..	..	..	..	..	..	..	..	..	1	8	1
Russia (including Courland and Finland)	10	584	363	221	59	3	122	10	5	217	26	2	245	23	..	..	..
Spain	7	222	125	97	16	..	..	..	..	..	..	7	222	16	..	..	..
Sweden	17	680	421	259	76	2	111	9	3	68	10	5	324	35	7	177	22
Switzerland	11	380	182	198	39	..	..	..	11	380	39	..	..	..	..	..	..
United States	55	7,155	4,085	3,070	481	8	346	26	12	584	62	35	6,225	393	..	..	..
Total	397	26,473	10,751*	8,545*	2,029	32	1,642	130	239	13,246	1,182	91	10,566	654	37	1019	63

* The reports from France and Prussia do not indicate the sex of the pupils.

INSTITUTION ITEMS.

BY THE EDITOR.

Clarke Institution.—The late Roscoe Green, one of the earliest pupils of this school, showed his gratitude to the Institution which had educated him by a bequest of $2,000 to Miss Rogers, in trust for its use and benefit. It is not an unusual thing for the graduates of schools and colleges for the hearing to remember *Alma Mater* in this way; we should be glad to see the custom become general among deaf graduates whose means permit. In this case, through some mismanagement of the executor of the estate, the sum received by the Clarke Institution is only $431.57. It is to be valued, as Mr. Sanborn says in his Report, "not so much for its amount as for the spirit of grateful recollection which it implies."

Colorado Institute.—Miss Lizzie Kirkpatrick, a graduate of the Evansville, Indiana, High School, has been added to the corps of teachers. She is new to the work of deaf-mute instruction, but has had some experience in teaching hearing and speaking children.

Columbia Institution.—The fiftieth anniversary of Professor Porter's connection with the work of deaf-mute instruction was pleasantly celebrated on Thanksgiving Day. The students and instructors gave expression to their appreciation of the value of his work as a teacher and writer, as well as to their personal affection for the man, in the presentation of a handsome mahogany chair and easel, which will remain a permanent memorial of the occasion.

In the evening of the same day the employees of the domestic department presented to the Institution a fine crayon portrait of the late matron, Miss Anna A. Pratt, beloved by all, but dearer to none than to the humble members of the department with which she had most to do. The portrait is the work of Mr. Arthur D. Bryant, a graduate of the Institution and of the College.

Iowa Institution.—Mr. Duncan McDermid, late of the Ontario Institution, has been appointed teacher.

Louisiana Institution.—Mr. A. K. Martin, superintendent, died on the 6th of October last. His disease was a cancer under the right arm, but the immediate cause of death was tetanus. He is succeeded by Mr. R. G. Ferguson, formerly of the West Virginia and Texas Institutions, and more recently principal of the Garfield School in New Orleans.

Maryland School.—The *Bulletin* says that "a plan for the rotation of classes, by means of which the pupils are brought under several different teachers, has been put in operation. Each teacher gives instruction in a special subject to three classes in succession, the character of the exercise being adapted to the grade of the class. It is thought that besides breaking 'dull routine,' and thus giving new zest to the learners, there will be a decided advantage to the pupils in coming in contact with different teachers daily. For the present the changes are limited to the afternoon hours."

Mississippi Institution.—The department for colored pupils was opened October 1 with 15 pupils. A suitable building has been erected for their use on a little farm a mile from the city. The white and colored boys both work on the farm.

The grounds of the department remaining in the city have been extended by the purchase of an adjacent lot, and a handsome school building of brick, providing ample school-rooms and a chapel, has been built. A new shop building will soon be completed, equipped for instruction in printing, carpentering, and shoemaking. The publication of an Institution paper will be begun in February.

Miss Mossie McGann of Montreal, Canada, has been appointed teacher of articulation, and has entered upon her work with an interest and enthusiasm that give promise of great success.

Nebraska Institution.—Miss Margaret Pollock, late a teacher in the Iowa Institution, and Miss Lucy Butrick, a graduate of the Nebraska Institution, have been appointed teachers.

Ohio Institution.—Rev. Benjamin Talbot has been appointed Acting Superintendent. Mr. Robert P. McGregor, a graduate of the Institution and of the National College, and late principal

of the Colorado Institute, and Miss Mary Rose, a hearing and speaking lady, have been added to the corps of instruction.

In October last Miss Thompson, teacher of articulation, was sent by the Board of Trustees on a tour of inspection to some of the Eastern institutions to acquaint herself with their methods of teaching articulation and lip-reading, and Mr. Keene, master of the carpenter-shop, was sent on a similar visit to the Illinois Institution to examine the methods and appliances there used in teaching trades.

Rhode Island School.—Mr. Homer resigned the principalship last March to engage in business in Boston. He was succeeded by Miss Katharine H. Austin, who had been for some time connected with the School as teacher.

Tennessee Institution.—Mr. Joseph H. Ijams, who for the past sixteen years has been principal of the Institution, and has conducted its affairs with great efficiency and success, died, December 24, 1882, of congestion of the brain, after a brief illness. His death is a serious loss to the Institution and to the profession.

Western New York Institution.—Miss Helen McGill has been added to the corps of teachers.

A new school-house and a building for the Kindergarten department have been erected. A shop-building is now being built by the boys under the direction of their foreman, the first floor of which will be used for a gymnasium.

MISCELLANEOUS.

BY THE EDITOR.

Priority in Deaf-Mute Instruction.—Mgr. de Haerne, in *Le Conseiller* for July, 1882, opposes the claim made by some German writers that the first instruction of the deaf was in Germany. Thus Dr. Eschke, founder of the Berlin Institution, asserts that the Germans preceded the Spaniards in this work. The only basis for this assertion is the fact that Joachim Pasche or Pascha, (1527-1578,) provost of Wusterhausen, Brandenburg, educated his deaf-mute daughter.

Now Pedro Ponce de Leon was born about 1520, and died in 1584. He therefore lived prior to Pascha and died after him. "To prove that Germany preceded Spain in the education of the deaf, it would be necessary to show at what date Pascha taught his daughter. This has not been done. Moreover, Pascha, according to Walther, taught his daughter by pictures, whereas Pedro Ponce trained his pupils by articulation, without, however, rejecting the use of signs.

"Another proof brought forward by many German writers in favor of their country is the mention of educated deaf-mutes by the Jesuit Kasper Schott, of Würtemburg, (1608–1666.) Since Schott was a German, they speak as if the facts to which he refers occurred in Germany. But this is not the case; they occurred in Italy and Spain. Thus he says in his *Physica curiosa*:*

"Novi in *Sicilia* (he taught philosophy at Palermo) virum doctissimum e societate nostra, qui surdus erat penitus et tamen promptissime de quavis re, tam cum nostris quam cum externis agebat, tametsi nullum perciperet verbum, dummodo labiorum motum loquentium videret. Hujus rei experimentum manifestum tum vidi, cum virum alium experimentum capere volentem perspexi diu cum illo colloqui, nullo prolato verbo, sed sermone tantum linguæ ac labiorum motu efformato. Idem notatum fuit in Layman, viro æque pio ac docto; qui cum, fistulæ cannæ incauta explosione prope aures illius facta in solemni quadam processione, vim audiendi prope omnem amisisset, assidua postea oris loquentium observatione didicit visu percipere, quod non poterat auditu. Similia passim occurrunt."

Mgr. de Haerne also shows how Schott, in his *Schola stenographiæ*,† quotes Digby's statement concerning Bonet's work of instruction in Spain and explains how a deaf person can learn to speak by watching the lips of others.

The Manual Alphabet on the Play-Ground.—The Western New York Institution began four years ago to use the "natural" method of language-teaching in all its classes. A description of the way in which it was applied may be found in the *Annals*, vol. xxv, pp. 212–216. In his last Report (1882) Mr. Westervelt, after speaking of the discontinuance of the sign-language in school exercises necessitated by this method, says:

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* Physica curiosa, s. mirabilia naturæ et artis. Herbipoli. 1642. Lib. iii, cap. 23, §3.

† Schola stenographiæ. Haremberg. 1665. Joco-seriorum naturæ et artis, s. magiæ naturalis cent. tres. Cent. 2, pag. 102.

But while the pupil continued to use signs on the playground and elsewhere as the readiest expression of his thought we could not hope for fluency in English. It seemed unwise, however, to require the school at that time to abruptly discontinue the use of signs in conversation. We endeavored by advice and example to induce the pupils voluntarily to use good English sentences in their conversation. After three years signs are not yet banished from our school, but the attention of an occasional visitor would be called to what signs are made by their infrequency. Many of our pupils have acquired a very considerable fluency in the use of conversational language, compared with whom pupils who have not made the effort necessary to accomplish this show an arrest of development that proves that their out-of-school habits of thought and expression and language surroundings have a very great influence either in making permanent the school-room work of the teacher or in effacing what he has done.

"*Deaf-Mutisms.*"—The *School News*, a little paper published by the students of the Indian school at Carlisle Barracks, Pa., mentions in its number for October, 1882, a visit paid by some of the Indian children to the Pennsylvania Institution for the Deaf and Dumb. One of these students writes: "I saw people who cannot talk. They talk with their hands immediately. I can understand what they say and those gentlemen make story about Indians." In another column of the paper we find the following specimen of English composition written by an Indian student: "I benefit Augustus brought corns to dining-hall." One of the boys in the country writes: "Capt., I hope to see you and your fatherly loved children of the forest soon." When such errors are made by deaf pupils they are called "deaf-mutisms," and are ascribed to the peculiar working of the deaf-mute mind, the pernicious influence of the inversions of the sign-language, etc.; when they are made by Indians and foreigners they are more correctly ascribed to an incomplete acquaintance with the English language.

Dizziness in Deaf-Mutes.—We published in the *Annals*, vol. xxvi, p. 198, a preliminary note by Professor William James, of Harvard University, on the sense of dizziness in deaf-mutes. Dr. James has continued his investigations of this subject, so interesting to many of our readers, and presents the results in the *American Journal of Otology* for October, 1882. By the kind permission of the editor of that periodical we shall reprint his article in full in the next number of the *Annals*.

Pretended Restoration of Hearing.—We find in the newspapers a great many wonderful stories of the restoration of hearing, but we seldom quote them in the *Annals*, because, while we are not in a position either to confute or confirm them, we have no confidence in their truth. Whenever a well authenticated case comes to our notice, as very rarely occurs, we are happy to record it, and whenever we are able from our own knowledge to declare the falsity of such a story we consider it our duty to do so. Here is a case of the latter kind. The paragraph quoted appeared first in the *Advance*, published at Jacksonville, Ill., and has since been copied into a great many newspapers:

> The Havana *Republican* tells in a recent issue of how one John Hammack, who, when a youth, lost his hearing entirely in consequence of a severe attack of spinal meningitis, recently recovered it entirely. John secured through his friends admission to the deaf and dumb institution here, and after completing the course of instruction, graduated. He then went to Washington and acquired an additional education calculated to fit him for imparting knowledge to others similarly unfortunate. Not many mornings since he found upon awaking that through some mysterious agency his hearing had been restored while he slept. He has since secured a position as teacher in the public schools in an Indiana town. This is truly a remarkable occurrence, and it has caused great joy to Mr. H. and all his friends.

It is true that John Hammack lost his hearing entirely by cerebro-spinal meningitis, and that he has been under instruction in the Illinois Institution and the National College; it is not true that he ever recovered his hearing in the slightest degree nor that he taught in a public school. He has been a student in the preparatory class of the National Deaf-Mute College during the past three months. He says he does not know how the story originated.

The Glossograph.—In the *American Journal of Otology*, vol. iv, pp. 190–193, Dr. Clarence J. Blake describes the glossograph, an automatic stenographic machine for the mechanical transcription of human speech. Every invention in this direction is of interest to our readers as holding out the prospect of a great possible boon for the deaf. We fear that the glossograph, ingenious as it is, is too inconvenient in its *modus operandi* to be of much real service; but in view of this and the other wonderful inventions of recent years, it is not unreasonable to hope that some instrument will yet be contrived that

will record ordinary human utterance automatically without inconvenience or annoyance to the speaker. We make some extracts from Dr. Blake's article, referring our readers to the *Journal of Otology* for a detailed explanation of the machine. Our articulation-teaching friends especially will find the omitted portions of interest.

This instrument is the invention of Amadeo Gentilli, and its object is the automatic transcription in the form of an easily translatable record of the human speech at its ordinary rate of utterance.

The operation of the instrument is a directly mechanical one, and in this connection it is interesting to consider that the first experiments which have resulted in its perfection were in process coincidently with the experiments in this country which have given us the telephone and the phonograph.

The first instrument for graphic record of vocal sounds was the phonautograph of Leon Scott, 1832, consisting of a bell-shaped mouth-piece closed at its smaller opening by a membrane carrying a pen which recorded the movements of the membrane, in response to the human voice, upon a blackened cylinder rotated in front of it. This instrument was improved by Helmholtz, and later by Mr. Marey, of the Massachusetts Institute of Technology; it recorded the component musical tones of the voice, a transcription valuable in science, not in the ordinary affairs of life. Edison went a step farther—made the record give back its movement to the membrane and reproduced the sound, but in neither instrument was the record legible. The acoustic method, therefore, it is evident, would not answer the proposed purpose, and, indeed, the experiments of Gentilli were from the beginning made in the direction of the mechanical solution of the problem—a problem exceedingly difficult and complex at first sight, and the solving of which should meet the challenge of the prophet, "Who shall record the speech of a man?" * * *

The task set before the inventor of the glossograph included, firstly, the analysis of speech, not according to its sound, but according to the purely mechanical conditions or situations in the mouth cavity during its production; secondly, the elimination from his scheme of such of these situations as were not absolutely necessary for transcription; and, thirdly, the mechanical device for transcribing.

In the words of the inventor: If we first of all set aside those delicate distinctions, those fine shades of speech which accompany all languages and their dialects, and which, however interesting they may be to the student of language, are merely that additional weight upon the pen of the writer which the newer orthography is striving to throw aside, the alphabet may be very much reduced and still fulfil all barely practical uses. * * *

From this short review it will be seen that the inventor was enabled to concern himself, for purposes of transcription only, with those movements which take place in the median plane of the mouth—in other words, he determined the mechanical equivalents of speech in the most accessible

part of the speech cavity, and then proceeded to use it to work his recording machine. * * *

The articulation movements may then be very simply classified, as follows:

Lifting of the back of the tongue, $\bar{c}$, *ch*, *r*, *g*, *o*, *u*.
Lifting the tip of the tongue, $\bar{c}$, *sch*, *l*.
Lifting the whole tongue, $\bar{c}$, *e*, *i*.
Pushing tip of tongue forward, *s*, *t*.
Lifting lower lip, *o*, *u*, *f*, *b*.
Sinking under lip, *a*.
Sinking upper lip, *f*, *b*.
Expulsion of air through nose, *n*, *m*, with accompanying tongue and lip movements.

The first attempt to record these movements was by means of electric contact points within the mouth, the apparatus consisting of a false palate of gutta-percha, having metallic discs set in its under surface, these discs being, when the palate was in place, opposite corresponding metal contacts on the surface of the tongue and lips, the accompanying wires being carried out between the teeth, and conveying the current passed, through apposition of the metallic surfaces, to the recording machine; it was found, however, that the fluids of the mouth soon impaired the perfection of contact, and so the working of the apparatus.

The second experiment, therefore, carried the electric contact surfaces outside of the mouth, the work being done by movement of the small levers; and, while this apparatus answered its purpose more perfectly, it showed, what was still more valuable, that the transcription could be done by purely mechanical means alone.

The perfected glossograph, therefore, consisted of a series of light arms or levers passing into the mouth, resting lightly in contact with the parts whose movements were to be recorded, and communicating these movements to a corresponding series of slide bars set in the frame-work of the machine, and in their turn moving pivoted arms, carrying at the farther end of each a pencil, the pencils having a motion at a right angle to the automatic movement of a strip of paper on which their record was made.

To record the expulsion of air from the nose accompanying the *m* and *n* sounds, a more elaborate arrangement was required on account of the slight motive force exerted by the expelled air. In front of the nostrils and attached to a light lever were two discs or fans, upon which the expired air impinged. The movement of these fans was communicated to the armature of a small electro-magnet, also set in the frame-work of the machine, and so to a corresponding lever and pencil; there being six levers and six pencils drawing parallel lines on the paper, the curves, resulting from a combination movement of any two or more pencils, could be read across the lines and translated accordingly; the inventor of this ingenious instrument claiming that the reading of the record is soon easily acquired.

The Brussels Convention.—We published in the last number

of the *Annals* (page 262) the programme of subjects to be discussed at the "Third International Convention for the Amelioration of the Lot of Deaf-Mutes," to be held at Brussels next summer. We have received the following additional information concerning the Convention.

A Local Committee, of which Mgr. de Haerne is the president, has been formed. Through the influence of this Committee, the Belgian government has placed at the disposal of the Convention the *Palais des Académies*, also called the Palace of the Prince of Orange. The Convention will open on Monday, Aug. 13, at 2 o'clock P. M., and will close on Monday, Aug. 21, the day before that appointed for the beginning of the national *fêtes* of Belgium.

Papers intended for the Convention should be sent before May 1 to the Committee of Organization, of which Mr. Eugène Pereire, Paris, is president. The papers will be summarised by members of a committee appointed for the purpose, and these summaries will form the basis of the discussions of the Convention. Each summary will present the conclusions of the paper, and will be followed by a separate note expressing the opinion of the reporter. Any writer of a paper who thinks himself incorrectly or insufficiently reported will have the right to explain his views himself to the Convention.

Convention of Swedish Teachers.—We are indebted to Mr. Olof Hanson, a student of the National College, of Swedish birth, for a translation from the *Tidskrift*, Nos. 4 and 5, of the Proceedings of the Convention of Swedish Teachers of the Deaf and Dumb, held at Stockholm in June last. Twenty-two members were present. Among the questions discussed were the following:

Ought idiots who cannot speak to be counted as deaf-mutes and instructed in institutions for the deaf and dumb? Answered in the negative.

Has the time come for dividing deaf-mute schools into three classes; and if so, how should the division be accomplished? Left undecided at this meeting.

Should the Institution at Stockholm adopt the oral method instead of the combined? Answered in the affirmative.

Miss Garrett's Pupils.—The Philadelphia *Press* for Sept. 24,

1882, contained a description by an enthusiastic reporter of a visit to Miss Emma Garrett's school, (Pennsylvania Institution, Branch for Oral Instruction, southeast corner 17th and Chestnut streets, Philadelphia,) in the course of which he quoted from Miss Garrett herself the statement of the attainments of some of her pupils as given in her paper published in the present number of the *Annals*. Mr. Jerome T. Elwell, a teacher in the Pennsylvania Institution, in a reply to the *Press* article published in the *Deaf-Mutes' Journal* for Oct. 12, spoke as follows of several of these pupils:

Being deaf myself, but with a small acquirement of speech, I was naturally much interested in the article, and subsequently visited the 17th-Street Oral School for the Deaf. I found there about forty pupils, with five teachers. The first class, on which so much praise was lavished, I was told consisted of eight pupils, and among them I observed Harry Gunkel, a bright boy who was under my instruction (by signs) ten months before his connection with the oral school, and for nearly four months afterwards. In the same class I noticed three other boys who had received about four months' previous instruction from me; also there was one in the second class whom I had taught the same length of time. Bearing these facts in mind, it is not difficult to explain how it is that this part of the first class have learned to "use intelligibly several hundred words, to write and spell correctly the majority of these words," "count up to one hundred," and "are able to name any figure up to one hundred to which you may point" "*in nine months only.*"

Mr. Elwell writes us that he committed one error in his letter to the *Journal*. "One of the three boys in Miss Garrett's first class mentioned as having been under my instruction for four months (Howard Weihenmayer) I taught ten months instead of four."

Miss Garrett makes this rejoinder to Mr. Elwell:

To the Editor of the Annals:

SIR: In reply to yours of November 18, asking me if I desired to reply to Mr. Elwell's article, I would say that the only result we observed in the five of our pupils who were under his instruction for some months was that they made many signs which took much time to repress.

The value that I put upon his instruction is best shown by the fact that when I learned that he was continuing his instruction to one pupil after he had entered my school I remonstrated with him, and supposed it was stopped. Subsequently I learned that it was being continued. I then visited the chairman of our committee, and asked for instructions. He told me to tell parents they must choose between the two methods. I communicated this information to the parents of the child, and they immediately decided to dismiss Mr. Elwell, and let the child remain in my school under pure oral instruction.

Four of Mr. Elwell's pupils happened to be naturally bright, and are in our first class. One of his pupils is in our lowest class, or rather one of our classes of beginners. We have had such a rapid increase that we have three classes of beginners.

To substantiate the statement made in my "Plea that the Deaf 'Mutes' of America may be taught to use their voices," I desire to state that there are four other pupils in our first class who had never been under sign or any sort of instruction. One of these came to us *two months later* than Mr. Elwell's pupils, but in seven months equalled any of Mr. Elwell's who had been under our instruction nine months. We attribute his more rapid progress to the fact that he did not have the disadvantage of sign instruction previous to coming to us. This pupil is reported by his mother to have lost his hearing at one year of age. We think he was probably born deaf.

I presume Mr. Elwell being deaf—and for that he has my deepest sympathies—lays no claim to the articulation and lip-reading of any of my pupils.

Our school has doubled in numbers since last August when I wrote my "Plea;" so Mr. Elwell's claim to having had something to do with the mental training of five of our fifty pupils cannot long affect a school of that size.

I enclose a testimony from one of the parents of the "five." I desire that it may be published with this letter in the January *Annals*. I have letters from the other parents to the same effect, but will only ask you to publish one, as it would encroach too much on your space to make room for them all. I will gladly furnish the addresses of the other parents to any one desiring them.

I cannot understand how any one can know anything of the benefits of pure oral instruction without trying to bring it within the reach of every deaf child. When I came before the public advocating a radical change in the instruction of the deaf of America I expected unjust attacks to be made upon me; but I know the adoption of the pure oral method is only a question of time, so I can bear them. Harder, much harder to bear—because so much more hopeless—are the visits that we occasionally have from grown deaf people who bewail their education by signs, and beg us to admit them at this late date to our school to make the deaf like hearing people.

Sincerely yours,

EMMA GARRETT.

We have not space to publish in full the mother's testimony to the success of Miss Garrett's teaching, but we assure our readers that it is as strong and cordial as any one could desire. With respect to Mr. Elwell's instruction she writes: "I am grateful to Mr. Elwell for the pains he took with Charlie while he was with him, but think the habits he there formed to render himself intelligible by signs instead of speech have been detri-

mental rather than beneficial to him." We are also informed that the parents of Miss Garrett's pupils, at a meeting recently held at the house of Harry Gunkel's father, passed a series of resolutions expressing their preference for the oral method and their appreciation of the management of the school.

The Late Institution in Chili.—The Minister of the United States to Chili sent the following information in reply to our inquiry with regard to the instruction of the deaf in that country:

There is no institution for the deaf and dumb in Chili at the present time. In 1865 a school was established in the Central House of the Good Shepherd at Santiago, for the education of girls only of this class, but it is now suspended. Two teachers were employed, and Señora Maria San Augustin de Jesus was principal. The Institution was supported by the general government by a donation of eight dollars monthly for each pupil and forty-eight dollars annually for the further necessities of the school. When the school suspended it had twelve pupils.

Appeal for the Verona Institution.—Padre Pendola, the venerable principal of the Siena Institution, publishes in the Italian journal *Dell' Educazione*, etc., for October, an appeal "to teachers of deaf-mutes in France, Germany, England, and America" in behalf of the Verona Institution. He says:

You have doubtless learned from the newspapers of the great disasters, material and moral, caused by the terrible floods which have prevailed in Lombardy, and more especially in the territory of Venice.

The Verona Institution for the Deaf and Dumb was a sufferer by these floods. The waters entered it to the height of two metres, destroying the furniture, the tools of the work-shops, the apparatus of the school-rooms, and damaging all the walls of the building.

The losses sustained by the Institution exceed $8,000.

The teachers and pupils weep, inconsolable, over the terrible ruins of this irreparable disaster. Alas! this Institution was one of the best in Italy! Speech was taught there with great success to all the pupils. Work-shops, provided with all necessary apparatus, had been opened for their instruction, including a printing office equipped with a rich collection of types and a lithographic shop, from which the Institution derived considerable profit.

To-day all is lost, and the poor teachers in their distress know not where to look for means to recover from the great calamity.

Although the Government and the people of Italy are making the most

generous efforts in aid of sufferers by the floods, their efforts are powerless to relieve the wants of these two large provinces.

And the unfortunate Institution for the Deaf and Dumb in Verona is perishing from want! Perhaps it will be compelled to abandon the work which charity and zeal had begun with happy success and carried forward from day to day with the greatest benefit to so many unfortunate ones!

O, worthy teachers! may your hearts be touched with compassion for your unhappy fellow-laborers!

In the name of the fraternity which unites all the institutions for deaf-mutes in Europe and America, I entreat you to give efficient aid that the life of the poor Verona Institution may be preserved.

Appeal to the generosity of your rich fellow-citizens and send their offerings to the unfortunate deaf-mutes of Verona. And upon the walls, restored by your work of fraternal charity, the Institution which you shall save, engraving thereupon your names, will be able to say to posterity: "I live, thanks to the aid sent, in 1882, by the teachers of deaf-mutes in France, Germany, England, and America."

British Societies for Adults.—The following list of British "societies for promoting the spiritual and temporal welfare of the adult deaf and dumb" is taken from a supplement to *Our Little Messenger*, edited by Miss W. Tredennick, Fortwilliam, Belleek, county Fermanagh, Ireland:

ENGLAND AND WALES.

THE ROYAL ASSOCIATION IN AID OF THE DEAF AND DUMB OF LONDON.—*Chaplain and Superintendent*, the Rev. Samuel Smith, St. Saviour's Church for the Deaf and Dumb, 419 Oxford Street. There are two other ordained missionaries and several lay assistants employed by this Association, besides the chaplain and superintendent. Services, lectures, etc., are held in various parts of London. Number of deaf-mutes to be cared for, about 2,000.

THE MANCHESTER SOCIETY FOR PROMOTING THE SPIRITUAL AND TEMPORAL WELFARE OF THE ADULT DEAF AND DUMB.—*Superintendent and Secretary*, Mr. J. Beattie, Institute, Grosvenor street. Two other missionaries. Provides services and lectures in nine different localities. Number of deaf and dumb, about 400.

THE LIVERPOOL ADULT DEAF AND DUMB BENEVOLENT SOCIETY.—*Missionary*, Mr. Robert Armour. Number of deaf and dumb, over 300. The deaf and dumb of Liverpool appeal for funds to erect a special place of worship for themselves. £790 have been collected, but more is needed before the building can be commenced.

ADULT DEAF AND DUMB MISSION FOR BIRMINGHAM AND DISTRICT, in connection with the Birmingham Town Mission.—*Missionary*, Mr. W. A. Griffiths. *Hon. Superintendent*, Mr. John Brown, 61 Caroline street. Number of deaf and dumb, about 250. Funds much needed to enable a second missionary to be engaged.

THE NORTH STAFFORDSHIRE SOCIETY FOR PROMOTING THE SPIRITUAL AND

TEMPORAL WELFARE OF THE DEAF AND DUMB AND OF THE BLIND.—*Missionary to the Deaf and Dumb*, C. J. Davis, 35 Windsor street, Hanley. About 165 deaf and dumb in North Staffordshire.

LEEDS UNITED INSTITUTION FOR THE BLIND AND DEAF AND DUMB.—*Hon. Secretary*, Mr. Thomas Harvey. *Superintendent of the Deaf and Dumb Department*, Mr. Joseph Moreton, The United Institute, Albion street, Leeds.

SOUTH DURHAM AND CLEAVELAND DEAF AND DUMB MISSION.—*Secretary and Missionary*, Mr. Austin H. Clarke, 34 Edwards street, Stockton-on-Tees.

SOUTH HAMPSHIRE DIOCESAN MISSIONS TO THE DEAF AND DUMB.—*Hon. Chaplain and Superintendent*, the Rev. C. Mansfield Owen, the Vicarage, Woolston, Southampton. *Missionary*, Mr. Richard A. Pearce, 14 Cumberland Place, Southampton. About 280 deaf-mutes in Hampshire and Isle of Wight.

THE READING MISSION TO THE DEAF AND DUMB.—Conducted by Mr. Joseph Salmon, of Market Place, Reading.

THE GLAMORGAN MISSION TO THE DEAF AND DUMB.—*Missionary and Secretary*, Mr. E. Rowlands, Miramar Villa, Cardiff.

THE DERBYSHIRE ASSOCIATION IN AID OF THE DEAF AND DUMB.—*Superintendent and Missionary*, Mr. W. R. Roe, Deaf and Dumb Institution, Victoria Street, Derby. 207 deaf and dumb in Derbyshire, and 50 more in immediate vicinity.

There is also in England a National DEAF AND DUMB TEETOTAL SOCIETY, of which Mr. S. Bright Lucas is President, and Mr. E. South, 53 Monsell Road, Finsbury Park, London, is Secretary and Treasurer.

SCOTLAND.

THE EDINBURGH DEAF AND DUMB BENEVOLENT SOCIETY.—*Missionary and Secretary*, Mr. W. J. Hansell. *Assistant Missionary*, Mr. P. M'Donald; Office, 11 York Buildings, Queen street.

THE GLASGOW MISSION TO THE DEAF AND DUMB.—*Missionary and Secretary*, Mr. John Henderson; Office, 126 Renfield street.

THE AYRSHIRE MISSION TO THE DEAF AND DUMB.—Headquarters, Kilmarnock. *Missionary and Secretary*, Mr. James Paul, Clark Terrace, Kilmarnock.

THE GREENOCK CHRISTIAN ASSOCIATION FOR THE DEAF AND DUMB, which includes a Mutual Improvement Society.—*Hon. Sec.*, Mr. George Whyte, 25 Regent Street House. *Treasurer and Secretary of Mutual Improvement Society*, Mr. John Vass, 93 Belville street, New Hillend, Greenock.

IRELAND.

DUBLIN PROTESTANT DEAF AND DUMB ASSOCIATION for the propagation of the Gospel among the adult deaf and dumb.—*Biblical Instructor and Secretary*, Mr. Maurice F. G. Hewson; Office, Christian Union Buildings, Lower Abbey street, Dublin.

THE DEAF AND DUMB CHRISTIAN ASSOCIATION.—*Hon. Secretary*, Miss W. Tredennick. *Catechists*, Mr. Robert Martin, Banbridge; Mr. Robert S. Lyons, Newtownstewart. Funds much wanted.

In Belfast special services are held for the deaf and dumb, in a place

of worship erected for that purpose, by Mr. Kinghan, Principal of the Institution there, by himself or one of his teachers.

In connection with the *R. Catholic Institution at Cabra, Dublin*, a mission is conducted once a year, when former pupils are brought up from the country for a week; also, the chaplain meets the adults of the city once a week in one of the churches.

Besides above special efforts, there exists "A NATIONAL DEAF AND DUMB SOCIETY," formed by the deaf and dumb themselves, which has for objects —To plant and maintain missions, and provide missionaries for the deaf and dumb where none are to be found. Three of the missions mentioned above are indebted to it for their formation. It is divided into two branches —one for England, of which S. Bright Lucas, Esq., F. S. A., 26 Keppel street, Russell Square, London, is secretary; and the other for Scotland, of which James Paul, Esq., 26 Clark street, Kilmarnock, is secretary.

Convention Proceedings.—Mr. Williams, Principal of the American Asylum, Hartford, Conn., writes us that he has on hand a number of copies of the Proceedings of the First, Third, Fifth, and Seventh Conventions of American Instructors of the Deaf and Dumb, which he is willing to supply, without charge, to any Institution that will pay the postage on them.

Mr. Mathison, Superintendent of the Ontario Institution, Belleville, Ontario, makes the same offer with respect to the proceedings of the Eighth Convention.

Reports Received.—We have received the following Institution Reports, published in 1882, in addition to those previously acknowledged:

Reports of the Clarke, Finland, Gerlachsheim (Baden,) Groningen (Holland,) Keller's (Copenhagen, Denmark,) Llandaff (Wales,) New England, Ober-Döbling (Austria,) Oral Association (London, England,) Portland, St. John's (Boston Spa, England,) Texas, Western New York, and Wilhelmsdorf (Würtemberg,) Institutions.

We have also received various other publications, notices of which will appear in the next number of the *Annals*.

ADVERTISEMENT.

The Misses Agnes M. and Emma E. Grimm are being trained by Miss Emma Garrett for "articulation" work. They will be ready to take positions on April 1st, and would be glad to communicate with institutions needing articulation teachers. Address Miss Emma Garrett, Pennsylvania Institution for the Deaf and Dumb, Branch for Oral Instruction, S.E. cor. 17th and Chestnut sts., Philadelphia, Pa.

[Continued from page 3 of cover.]

LANGUAGE LESSONS,

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[illegible]ge.)

Designed to introduce [illegible] foreign to a correct understanding [illegible]

It is believed that this [illegible] the directions for use are so minute [illegible] familiarity with the instruction of [illegible] may with [illegible] satisfactorily carry forward their education. It is therefore adapted [illegible] instruction as well as for use in the [illegible]. In the latter it is admirably fitted to serve as a standard of attainment and a means of securing uniformity of method, thus [illegible] classification easier, and obviating the injury which often arises from transferring a pupil from one teacher to another. By its means the education of a deaf mute can be successfully commenced at a very early age. In order to employ it to advantage it is not necessary to [illegible] text-books, but it will, it is thought, supply many deficiencies, and moreover form in the pupil the habit of [illegible] language.

With this view it need [illegible] to [illegible] classes, as all the pupils in an institution would derive a benefit from going through the exercises.

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